

# The National Locksmith®

• [TheNationalLocksmith.com](#) •

May 2000  
Volume 71  
No. 5  
\$5.00  
**CODES!**  
GEO U0001-U2000, Part 2  
page 122



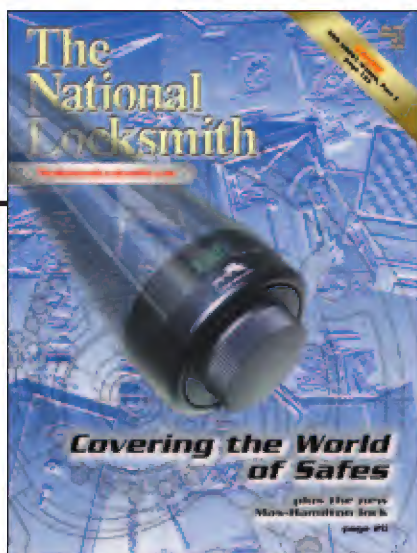
## ***Covering the World of Safes***

plus the new  
Mas-Hamilton lock

page 20



**On The Cover...**



Revolutionizing electronic combination lock design with self generating power, the Mas-Hamilton X-07 broke all the rules. The next generation X-08 does it once again.

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The National Locksmith® ISSN #0364-3719 is published monthly by the National Publishing Co., 1533 Burgundy Parkway, Streamwood, Illinois 60107-1861. Periodicals postage paid at Bartlett, Illinois 60107 and additional mailing offices USPS 040110. Subscriptions \$41.00 per year in the USA; \$54.00 per year in Canada; \$67.00 in all other countries. Single copies \$5.00 each. Postmaster, please send change of address to National Publishing Co., 1533 Burgundy Parkway, Streamwood, Illinois 60107-1861. ©2000 by the National Publishing Company. All rights reserved. Printed in the U.S.A.



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# CONTENTS

The National Locksmith May 2000 • Vol. 71, No. 5

## FEATURES

### COVER FEATURE! 20

#### The New Mas-Hamilton X-08/CEX-08, Part 1

*The installation process for the X-08.*

### 107

#### Quick Entry Update

*Opening the 1997-2000 Chevrolet Corvette.*

### 32

#### The 1999 Mitsubishi Gallant, Part 2

*Concluding with the door locks, glove box and spec sheet.*

### 112

#### 1998 Yamaha V Star Classic

*There are only two locks on this bike to originate a key.*

### 40

#### Getting Into Combination Padlocks, Part 5

*Open sesame.*

### CODES 122

#### Geo Codes

*U0001-U2000, Part 2.*

### 54

#### Medeco® Siteline®, Part 2

*This month we cover how to install the software.*

### 126

#### The 2000 Cadillac Deville

*The 2000 Deville is built on the new General Motors "G" chassis.*

### 62

#### SecureRite.com From The Source

*Bringing business to you.*

### 135

#### TheNationalLocksmith.com

*Visit us online for technical forums, chat, online store plus visit our sponsors.*

### 80

#### To Boot Or Reboot

*Exercises in R&R on electronic locks.*

## DEPARTMENTS

- 5 COMMENTARY
- 6 MANGO'S MESSAGE
- 10 LETTERS
- 16 SECURITY CAFÉ
- 46 BEGINNER'S CORNER
- 70 TECHTIPS
- 87 THE LIGHTER SIDE
- 98 BUSINESS BRIEFS
- 136 TEST DRIVE



# COMMENTARY



## An Alarming Industry Trend.

As a locksmith, you probably keep an eye out for additional profit centers you can incorporate into your business. For some smiths, alarms have been just such a source of additional profits. And for others, alarms have been a source of more headaches than cash.

Recently, a discussion on this topic evolved in the Locksmith Forums of our web site at [www.TheNationalLocksmith.com](http://www.TheNationalLocksmith.com). Most interestingly, two totally opposite points of view emerged when discussing alarm systems, both wired and wireless. Wireless alarms are often more enticing to locksmiths due to the fact that installation is a good deal less complex than with traditional wired systems.

One locksmith, Mike Spencer, said, speaking of his experience with wired systems: "Alarms may be a good addition to your business. Or maybe not. I just recently dropped alarms from my locksmith business after sixteen years of installing them."

He went on to mention that he used to be the only installer within his county, but that number grew to six and the competition drove down prices significantly. And just as important, in his case anyway, "My biggest problems in business were all alarm related. A lock that breaks down is no stress to repair. An alarm system malfunctions and not only is the customer angry, but so are the neighbors and police."

On the other hand, locksmith Les Moyer retorts: "I have been selling and installing wireless alarms for about ten years. Started with Linear, then went to Interactive Technologies, Inc. (ITI) exclusively. I can install a system in a day or less with just my wife and I. The systems are very dependable. Our average sale is \$2500-3500, with profit margin over 40%."

Les obviously has found that for his business, wireless alarms are profitable and a good addition to his other services. He goes on to say, "Things to consider: Never compete with the cheap guys. You will

lose as they are very efficient and their sales force is well-trained. Stay with the best product you can find and charge for it. You will not win a lot of sales, but the ones you get with customers that can see value will be worth it. We only sell on referrals now and the money is very good. I enjoy the alarm side of security."

Be aware that requirements for licensing for alarm installations may vary from location to location, but the requirements may be less stringent when considering wireless systems since many can even be homeowner installed.

It is interesting, however, that one man's meat is another man's poison.

And speaking of the internet, not only did our web site give me the idea for this month's Commentary, but it also helped when I got stuck trying to remember the one man's meat is another man's poison thing. I couldn't remember the whole phrase. So I went to Hotbot.com and typed in the part I remembered. I was instantly directed to a site which lists most all proverbs.

(<http://www.cj.5c.com/proverb/pblife.htm>)

Finally, when I asked Hotbot.com to show me pages for the phrase "wireless security systems," it gave me dozens of results. Check it out if you're interested in this phase of the industry.

*Marc Goldberg*



**Have questions? Want free technical help?  
Free Locksmith Forums!**

[www.TheNationalLocksmith.com](http://www.TheNationalLocksmith.com)

**Marc Goldberg**  
Publisher

May 2000 • 5



# Mango's Message

**T**here are few things that will send a locksmith's heart fluttering faster than acquiring a finely crafted tool, especially if the tool is designed to surreptitiously bypass a lock. As for any tradesman, knowledge and tools are our greatest possessions. We all have our favorites that we couldn't imagine being without. For many, those favorites consist of tools designed to surreptitiously and non-surreptitiously defeat or bypass a pin tumbler lock, lever lock or combination lock. It's the heritage of this industry and knowledge of which separates us from them. Let's face it, it's the lure of the lock and the intimate knowledge and challenge to defeat that interests us all, whether it be to pick, impression or manipulate.

At last years ALOA Convention in Cincinnati, OH the presence of a new company was causing quite a stir. Marketing Service Consulting (M.S.C.) was exhibiting lock defeat tools that was certainly grabbing the attention of all who attended.

According to their brochure, Marketing Service Consulting has been involved in the development and sale of special opening tools since 1986. Headquartered in Hamburg, Germany with a US office in New York, NY the company provides products and services such as: Risk analysis; Protection against bugging; Jamming transmitters; Scrambling devices; Lock force tools; Car openers; Hand pick tools; Safe manipulation tools; Electronic surveillance systems; Detection devices; and more. M.S.C. is also involved in training specialists in using the company's equipment.

A couple of the tools on display that peaked my interest were:

## **The Multi Pick**

Touted as: "The most successful multi-point cylinder opener of the century." M.S.C. claims: "The Multi Pick is a professional device for the non-destructive opening of cylinder locks. The secret of this device is the fast vibrating frequency with round, ellipse-like movements of the pick needle. Almost no lock can resist the faster vibrating frequency, no matter how well the lock is built. Even locks with more than one dimension and up to 20 pins can be opened in seconds. The Multi Pick will open multi-point locks, lever locks, car locks and with supplementary equipment, security shield locks and disk locks." Price: \$699.00.

## **The Lockforce**

M.S.C. claims: "The Lockforce is the most efficient tool combining three different



## **Where's the Proof?**

*ways to open doors. The Lockforce allows one to overcome almost any current round or profile cylinder. Neither of the listed opening techniques will cause damage to the lock shield. The Lockforce works on any kind of profile and round cylinder no matter what material it is made of. You can open almost any lock up to the high-security ones." Price: \$229.00.*

Another interesting tool being offered was the "Sputnik." It's designed to decode and open pin tumbler locks. It featured a blank key with five adjustable hair fine wires that protruded from the blade. With the key blank inserted into a lock, an attaching arm controlling each wire is used to project the wire into the cylinder, theoretically measuring the bottom pin and decoding that chamber.

In all there had to be 20 or more tools designed to defeat just about any lock, including Medeco, Abloy, Mul-T-Lock, I-Core, Profile cylinders, pin tumbler, lever and more. It was an impressive array of products backed by even greater claims.

As you can imagine, there was always a crowd of people around this exhibit booth, so naturally, I had to poke my fat head in and take a look around.

I intently listened to the M.S.C. representative give his product presentation to the eagerly inquisitive crowd as I scavenged over the products. I must admit that at first glance this did not look like German engineering to me. It more closely resembled Soviet Republic

**Greg Mango**  
Editor







engineering. In fact, in relation to one of their product names, some of the tools looked like parts that fell off the Sputnik. (The Soviet Union's first space satellite to orbit the earth.)

As I listened to the M.S.C. representative (who I believe was also the primary product designer/engineer) make claims of defeating just about every high-security lock in existence, I noticed that not once did he ever do an actual demonstration. Being one who is naturally skeptical, I wanted to *see* proof.

I picked up the Multi Pick set reputed to pick open Multi-T-Lock cylinders and asked for a demonstration. The representative proceeded to tell me how it worked, but avoided an actual demonstration, citing lack of a cylinder for demonstration purposes.

*"That's not a problem" I stated, "I'll get a cylinder to demonstrate on."*

His evasive manner and body language indicated he was not about to do an actual demonstration, so I decided to twist the nut a little harder.

I told him I would get a Mul-T-Lock cylinder and if he could pick it, I would buy the tool. The price of the Multi Pick set was \$699.00. Now, if you believed in your product and you knew that all you had to do was

demonstrate it to sell it, wouldn't you? The demonstration never did occur, even after repeated requests.

I was now being avoided, as he would focus on other customer inquiries.

O.K., now he's got my dander up and I'm digging my heels in. He hasn't gotten rid of me yet.

I next selected the pin decoding "Sputnik," to have demonstrated. With the tool in hand I wedged my way through the crowd and again politely, but firmly, requested a demonstration. He once again proceeded to tell me the design concept behind the tool, avoiding an actual demonstration. Still not satisfied I again asked for a demonstration, assuring him I would purchase the tool if it worked. The price for the Sputnik was \$795.00.

Knowing that I would not be easily deterred, he did position the tool in a pin tumbler cylinder, but never did decode it.

Now I'm out for blood. I introduced myself, indicated which magazine I represented, handed him my card and a copy of the magazine and asked to be sent some product so I could do an article. He cordially obliged and I went on my way, knowing full well that I would not receive a thing. Sure enough, I didn't.

Months later I had my assistant repeatedly call and request product for an article. I'm still waiting and it has now been almost a year.

**D**o any of the products by Marketing Service Consulting actually work? I don't know. I can't say they do, I can't say they don't. The theoretical concepts were there and they looked like they would. All I can tell you is my experience with this company and hope that it throws caution to the wind should you receive promotional product material. M.S.C. may have tremendous products. If so, then why not demonstrate them?

There is no doubt that M.S.C. had a number of interesting products on display that created a lot of attention. Locksmiths love their tools and this company's offerings touched a nerve in all who attended... myself included. Believe me, there was no one who wanted to know that these products worked more than I did. In next month's issue of *The National Locksmith*, I would have loved nothing more than be able to tell you that I uncovered the secret to the holy grail, a quick, easy and effective means to bypass Medeco, ASSA, Mul-T-Lock and Abloy. However, it's one thing to make a claim and quite another to substantiate such a claim.

You can bet that Medeco, ASSA, Mul-T-Lock and Abloy were also interested in what M.S.C. was doing. While I was at the M.S.C. booth, representatives from each company poked their head in to investigate. The Medeco rep even had a lock in his hand to see if it could be picked. Apparently none of them are too concerned either or you would have heard about it.

I remember a few years back there was a classified advertisement running in the magazines promoting a device to defeat Medeco locks. I believe it was about \$150.00. What you received for your \$150.00 was a shiny new ice pick. That's right, an ice pick and instructions.

At first glance you would have thought for sure you were the biggest sucker on earth. To use your newfound Medeco defeat tool, you were instructed to drill at an angle, a small hole at the 12:00 position just above the lock housing halfway through the door. Insert the ice pick and flip the exposed actuating tang on the deadlatch back to unlock.

You know what? It worked! The infamous ice pick procedure had every high-security manufacturer scrambling to design a shield that would protect the deadlatch actuator from this procedure.

Show me the proof and I'll believe, give me a line and you're wasting my time! **TNL**





# Letters

*The National Locksmith* is interested in your view. We do reserve the right to edit for clarity and length.

## Roadside Assistance Delays

As a locksmith who specializes in automotive work, I frequently call the various roadside assistance phone numbers, which are published and widely disseminated to obtain key codes for vehicles whose owners have lost keys. In most cases, the responding agency has been very helpful. A notable exception, however, is the agency listed for Ford, Lincoln and Mercury. They may be adept at dispatching a wrecker service, but they have proven to be useless as far as providing codes for vehicles.

I have been in business in the same location for 28 years and I have full credentials from ALOA and a spotless record in vehicle locksmithing. Yet I have been consistently unable to get key codes from this manufacturer.

I warn all other locksmiths: If you need a Ford, Lincoln or Mercury key code, don't waste your time trying the respective roadside assistance numbers.

*David A. Keenan  
Vermont*

## But it's "The Law"

Thanks for the great magazine. I have read many times about the police "stealing" car-opening jobs from locksmiths. A bigger threat is "ACE hardware stores". Here in Orange County, CA, they are going all out for re-keying business. California law prohibits this activity because they need a locksmith permit. However, they refuse to get one.

The Bureau of Security and Investigative Services is not doing much about it at this time. Enclosed is a copy of the California law.

"Locksmith" means any person who, for any consideration whatsoever, engages, directly or indirectly and as a primary or secondary object, in the business of installing, repairing, opening, modifying locks, or who originates keys for locks. A "locksmith" shall not mean any person whose activities are limited to making a duplicate key from an existing key.

*Richard Ingeman  
California*

P.S. Soon after sending you this letter, I was contacted by Ernie Chard from the Department of Consumer Affairs Enforcement Division regarding my concerns. Mr. Chard's comments were:

I received the fax, which you sent me on Friday regarding Ace Hardware stores. We will be opening unlicensed activity cases on each of the stores which are listed on the second page of the fax.

Thank you for providing us with the information.

It's good to know something is finally being done.



## I Love It

I have enjoyed your magazine for many years. The Technitips are always interesting although some of them seem to be a waste of time. Sara Probasco's "The Lighter Side" is always good reading. I enjoy all of the automotive tips on openings and key generation. Also all the safe opening information is very useful and informative. Keep up the good work.

*John E. Larocque  
Canada*

## Corporate Copout

On a Sunday evening at the end of October 1999, I was called by Corporate Service Network to service one of their clients, Crown Books, in Danville, CA.

I was asked if I would take a P.O. number and bill Corporate Service Network, 300 Vanderbilt Motor Parkway Suite 200, Hauppauge, NY 11788. I said I would and was assured that I would not have to worry that they always paid their bills.

Well, I have made at least ten calls

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**1533 Burgundy Parkway**  
**Streamwood, IL 60107**  
**Attn: Editor**



to them and am always told that its being taken care of and a check will be mailed. I just would like to warn other locksmiths to not fall for this outfits baloney.

*Acelockkey  
E-Mail*

### Wisconsin Professional Locksmith Day

I received the following from Wisconsin State Assemblyman Larry Balow, 68th District: February 3, 2000:

Enclosed is the text of a resolution I have drafted proclaiming the first Monday in October as "PROFESSIONAL LOCKSMITH'S

DAY" in Wisconsin. Could you please review the draft and reply to my letter with any additions or subtractions you believe would contribute to this resolution.

*State Representative  
68th Assembly District*

### Wyoming Locksmith Day January 18th

This is to let you know that Governor Jim Geringer of the Great State of Wyoming has declared January 18th to be Wyoming Locksmiths' Day.

### Wrong Code

If you are given a GM 2000 code and it's wrong, don't be surprised. It was this past Saturday morning that a local GM dealership's service department called me asking if I could cut a key by code for a 2000 Chevrolet Impala they had just sold the day before. The legal owner was waiting for a key to be cut per code given over their Tracs System in the "S" series. I replied yes, I'll manufacture the non-passkey III B91 Corporate keyway and deliver it to you, which I did.

Upon arrival I met the vehicle owner's wife. I told her that if the key per code given didn't work to unlock the vehicle to give me a call. Her husband did, stating that the B91 would enter fine, but wouldn't turn the door cylinder and asked if I'd come down to the site and open the vehicle? I said yes.

Upon arrival, the first thing I did with the owner present was investigate the vehicles linkage inside which was horizontal with power door locks. I lightly wedged the window about 1/2" from the front of the vehicle, then took my optic flexlight checking for possible barriers and in turn finding my entry point. I then pulled my trusty HPC CO-60 and opened it.

Since the first key didn't work I was skeptical about what the true code was. I found that it was totally wrong. I cut the owner a key that would work, trying it in all of the locks. Then I called the dealer back telling them to correct the error in their files. I have found that GM codes and bittings are often incorrect. I hope this will save some of my other fellow locksmiths the grief.

*Willie R. Bowen  
Virginia*

### Learning As We Go

Having read the letter entitled "Learning as We Go" in the February 2000 issue of The National Locksmith, I wish to take exception. The author of that letter claims to be a CML and so am I. He says no locksmith should take a job for which he is not qualified. He should instead refer the customer to someone else who is. I agree with him to a point.

There have been numerous jobs

# Ask Dave



You asked. He answered. This is safe and vault Q&A with an attitude.

CLICK HERE TO LEARN MORE



#AD - 1



in my 25 years of locksmithing where the problem was on a new product for which there was no information, no classes to attend and no one to refer a customer to who knew any more than I. For example, the first Suzuki Samurai was on the road for a couple of months when a woman called me and wanted a price on having the whole vehicle recombined to a new key. Suzuki had only made motorcycles up to that time. There was no information to be had on that vehicle. The dealer had neither key blanks nor exploded drawings

of the locks. I could not buy a new set of locks from either a dealer or a local lock supply house here in Philadelphia, PA. There was no listing in a key blank directory for what key blank to use. There was no listing in the ASP catalog for any lock supplies including replacement caps for the door and hatch locks. I called Steve Young who didn't know anything at that time either.

I have worked on all of the Japanese cars, stock all of the key blanks and all of the ASP replacement caps. So I thought that

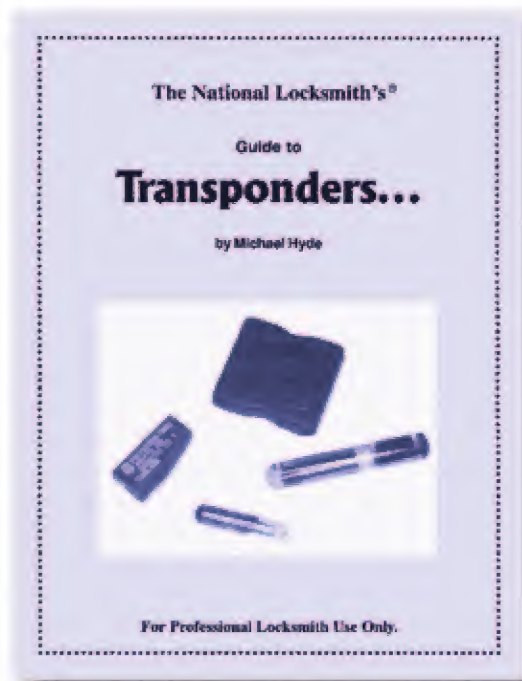
maybe I had enough stuff to do the job. The customer told me that one key worked the whole car. When she brought the car to my store, she told me that she knew that nobody around knew anything about it, but that I had been the most receptive to doing the job, so she brought it to me. For me it was an exploration.

I used a Dodge Colt key blank X54 because it worked. The ignition came out like a Toyota ignition cylinder. I recombined it. A new one wasn't available anywhere. The local dealer didn't have new locks to put in the vehicle, or to sell to me. I wrote up the experience for my local locksmith association newsletter so as the spread the word. On any new item that locksmiths service, somebody has to be the first to service it. From such an experience, classes and trade magazine articles emerge. For a CML to say that no locksmith should take on a job for which he's not thoroughly qualified to do must be from another world. The first time any locksmith does any job, it takes him longer than the second time, because there is some self-exploration going on.

When I teach an apprentice locksmith, I do it in a way that I expect him to extrapolate what he learned on some prior job so as to apply that knowledge and sense of touch to the next level of difficulty. He isn't necessarily going to always have a master locksmith there to help him out. He's going to be on his own someday. It's important for locksmiths to be able to figure things out for themselves. There are only so many ways to mechanically put things together so that they work. The apprentice needs to learn them and be able to apply that knowledge to the real world. All the classes, books and magazines won't make you a master locksmith. One has to be out in the real world doing it everyday. If you never take on a job that is not a piece of cake, then you can never learn anything, because nothing is a piece of cake the first time that you do it.

*John Dunn, CML  
Pennsylvania*

## TNL's Guide to Transponders



Over 350 pages in a handy binder to accept updates as needed.

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#TS - 2001

TNL



# Security Café

**DROP IN FOR  
TOOLS, TECHNOLOGY  
& EQUIPMENT**

## Visonic Inc. CL-81 Keypad

Visonic Inc. has introduced the toughest anti-vandal resistant indoor/outdoor access control keypad available today. Made of rugged, all metal die-case housing and keytops, the CL-81 is suitable for the most demanding environments (rain, sleet and snow) as well as extreme heat and cold. To prevent vandalism, the tough external keypad is held in place by special security screws and a tamper switch is included to detect separation from the wall.



The CL-81 actually includes two keypads, one external and one internal keypad. The "brains" of the CL-81 are enclosed in an indoor unit - the CL-8A - designed to be safely installed within the protected premises, out of reach from vandals. The CL-8A offers up to 56 eight-digit user codes, EEPROM, 3 separate outputs and it operates on 12 or 24 volts AC or DC.

## OSI Introduces New Omnilock

OSI Security Devices new OM2000 Series offers 2,000 user codes and/or track 2 or 3 magnetic stripe cards, 2000 record audit trail which detects and records key entry's, 8 user

transfer system utilizes a Windows CE palmtop computer, which communicates bi-directionally, via infrared with the lock.

OSI's patented motor drive system allows for an estimated 80,000 operations from four "AA" batteries. Available in cylindrical or mortise configuration, the ADA compliant lever-set installs in minutes into a standard ANSI door preparation and are available in an assortment of finishes.

## New STI Bopper Stopper

The newest member of the STI Stopper Line is a super-tough hinged cover called Bopper Stopper that protects a wide assortment of devices.

Bopper Stopper was originally developed by STI to protect members of its extensive new line of multi-purpose push-button units. Both the cover and its hinges are molded of polycarbonate,



groups and 32 holiday periods. Maintain your database of 50,000 users and program the lock with the new ODM, Omnilock Data Manager software, using a computer with Windows 95/98/NT. The Omnilock data



while the hinge spring is formed from stainless steel. Bopper Stopper comes complete with installation screws.

## Modular Access Control Power Supply

The new SDC 602RF modular power supply is specifically designed for use with access controls and electric locking hardware. UL listings include Access Control Systems Unit, Fire and Burglary Alarm Power Supply and Releasing Device Accessory.



Features include 1 Amp output, field selectable 12/24VDC, fire emergency release input, choice of 10 relay modules, battery charger and low battery disconnect. The specified secondary output is maintained while charging.

## Secura Key High Performance Proximity Reader

The Radio Key RK-WS is the newest reader in the Radio Key family of superior proximity products. Secura

Key's exclusive DYNASCAN technology assures maximum performance in any environment. The reader measures less than 4 1/2" x 3 1/4" and has read distances up to 8". The unit is completely potted and is rated for extreme weather and vandal resistance. It includes a bi-color LED and buzzer control, which are field selectable.



Installation of the Radio Key RK-WS is easy. Two screws mount the unit to a single-gang electrical box, masonry wall, post or almost any surface. Also available is the Radio Key RK-WM, which mounts to a mullion and has a read distance of up to six inches.

## Locknetics Programmable Stand-Alone Strikes

Locknetics Security Engineering has introduced the industry's first stand-alone, computer-managed series of strikes. These strikes are battery-powered for easy installation without the need for additional wiring. Equipped with Locknetics' CM controller, they accommodate up to 150 user codes and/or TouchEntry



## SECURITY CAFÉ

data keys, with an optional audit trail of the last 100 events. Optional expanded memory is available for up to 500 users/events.



Locknetics' 9100BP and 9200BP Strikes feature a universal design similar to the company's hardwired 9100 and 9200 electric strikes: the 9100BP works with cylindrical and mortise-style, non-deadbolt locksets; the 9200BP is designed to work with virtually any rim exit device.

### New 5000 Series Exit Devices from DORMA

DORMA Architectural Hardware has a new 5000

series exit device, which features quiet operation with a new touchbar design and can be installed on narrow style doors where a standard device may not fit. The 5000 Series also features a narrowed projection touchbar assembly, which minimizes catch hazards. Its partial length touchpad permits field installation of such options as cylinder dogging and exit alarm.



Manufactured for panic and fire labeled openings, the 5000 series features rim, surface vertical rod, concealed vertical rod and mortise devices and a full complement of trim that will meet most narrow style door applications. The DORMA

5000 series is certified to meet the requirements of ANSI/BHMA A156.3 for grade 1 exit devices.

### New Improved Darex SP Drill Sharpeners

The SP Series Precision Drill Sharpeners are perfect for high production shops where the priority is on speed and accuracy. SP's sharpen drill sizes form 1/16 to 1 inch (1.5mm-26mm). The consistency of point style makes the SP ideal for industrial situations where people of varying skill levels will operate the drill sharpener.



There are two basic SP models. The SP2500 creates split points; the SP2000 creates helical points. The easy-to-use SP sharpeners are designed with the operator in mind. The operation is a very easy procedure. With the possibility of human error essentially eliminated, the SP's deliver outstanding accuracy and repeatability. Recent improvements include a new adjustable point splitter. These sharpeners are now UL approved. This means greater accuracy, versatility and you assurance of safety.

### Sargent & Greenleaf One-Piece Handle with Spindle

Sargent & Greenleaf recently added a new one-piece safe handle to its line of products. Unlike existing S&G safe handles, the new one-piece handle comes complete with a spindle, offering

## Safe Opening Volumes 1-5



These are the classic safe books you will need to open most any safe easily and professionally.

- Volume 1 - Modern Safes
- Volume 2 - Modern Safes
- Volume 3 - Antique Safes
- Volume 4 - Antique Safes
- Volume 5 - Very Recent Safes

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#SO - 1, SO - 2, SO - 3, SO - 4, SO - 5





CIRCLE NUMBER  
319

manufacturers convenient installation without the need to provide their own.

The new handle increases flexibility in retrofitting, and features a sleek new shape in either a rich satin brass or satin chrome finish.

### Jensen Presents New Tools

The Acu-Min Pollicis series miniature hand tools, available from Jensen tools, feature anti-static, ergonomically designed handles. Developed from over 50 years of experience

CIRCLE NUMBER  
320

designing miniature hand tools for the professional electronics and industrial marketplace. The unique handle has been developed to relieve tension on the Pollicis muscle between the thumb and finger, which spin the driver.

Available in four different handle styles. The Multi-Handle sets have blades molded into the handle. The Single-Handle sets have one handle with interchangeable blades. The 6-in-1 Reversible Tip Phillips/Slotted set, and an 8 piece Extended Blade set.

### Gradient Lens 90° Angled Eyepiece for Borescopes

The Gradient Lens Corp. has added The Hawkeye Angled Eyepiece AE 9003. The Hawkeye lets the user look from the side. This accessory clamps onto the borescope eyecup and reflects the image 90°.

It has adjustable focusing, so objects over a wide range of distances can be imaged in sharp detail. The



CIRCLE NUMBER  
321

Hawkeye Angled Eyepiece works with any rigid or flexible borescope with a standard DIN eyecup.

### New G-U Products

The "Bellissimo" Collection features four new levers and a selection of escutcheon plates, which reflect state-of-the-art design, forged to perfection for strength, longevity, and ease of operation. They are all specifically crafted to operate on G-U multiple lock deadbolt above-latch or deadbolt below-latch systems.

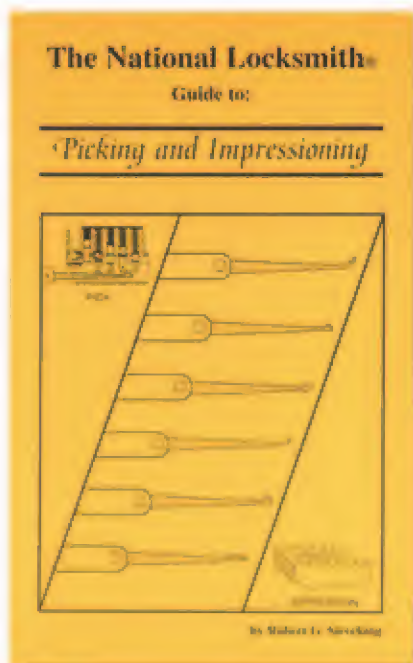
The levers and plates are available in seven different finishes: satin chrome, polished chrome, brass



CIRCLE NUMBER  
322

polished, antique brass, 10B (dark bronze), white powder-coated and pewter. In the Bellissimo Collection, the 5000 series escutcheon plate with the "Capri" lever is backed by G-U's optional LifeGUard warranty.

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#PI



COVER  
STORY!

— Part One —

# The **NEW** **MAS-HAMILTON** **X-08 / CEX-08**



by Sal Dulcamaro, CML

**M**as-Hamilton has recently introduced the X-08/CEX-08 high security electronic lock to replace the earlier version X-07. Previously, the X-07 was the only approved safe lock for GSA containers. The X-07 and X-08 are manipulation resistant locks designed for use on government containers that hold classified documents.

The locks are self-powering with their own power generators, and they do not require batteries. Those locks share the Powerstar technology that is used on other Mas-Hamilton electronic locks. It makes use of non-volatile memory and could be left untouched for extended periods without losing track of the opening combinations or the number of times that the combination was correctly dialed.

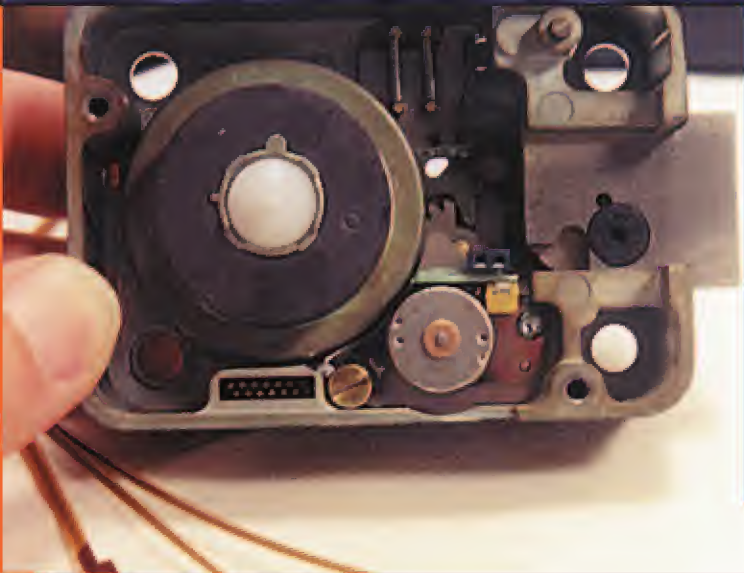


1. The top of the X-08 lock case.



2. The back cover of the lock.





**3. Inner workings of the X-08.**



**4. The drive cam assembly is to be removed.**



**5. The outer tube being fit.**



**6. The tube is seated.**

Many features of the new X-08 are similar to the earlier X-07, while certain features are entirely new. In this article I will describe the installation process for the X-08, and then explain the operation and programming of the lock in a later article.

*Photograph 1*, shows the top of a lock case for the X-08. The label identifies it as the model X-08. All model X-08 and CEX-08 locks will have the same basic lock case. The CEX-08 has a number of additional features and capabilities, compared to the model X-08.

*Photograph 2*, shows the back cover of the lock with all the circuitry. On the bottom, in the middle of the cover, is a round shaped object with a square paper label. This label identifies the electronics of the back cover and determines whether it is an X-08 or CEX-08. The label indicates: CEX8.2, which identifies it as a CEX-08. Below that, on the same tag, is the serial number: 750136. The serial number is important, because it is used for certain programming functions. This photograph was taken before a special protective coating (called potting) to seal and protect the electronics of this CEX-08 lock.

### **Installing the X-08/ CEX-08**

The back cover is already removed in *photograph 3*. The drive cam assembly is then removed from the lock case assembly. (See *photograph 4*.) The X-08 can be installed in most standard preps without additional drilling. A template is included if needed.

A built-in generator produces enough power to both operate and program the X-08. A set of two small tubes is used to allow a series of ribbon cables to go from the lock assembly on the inside to the dial ring assembly on the outside. The ribbon cables fit between the inner and outer tubes. The spindle fits within the inner tube so that rotation does not physically interfere with or damage the ribbon cables. Both tubes must be cut to size for the particular door (or drawer) thickness.

The outer tube must be cut first. *Photograph 5*, shows the outer tube being fit over the cables with the flared end toward the lock case. The tube is seated on the tube retainer on the back of the lock case. (See *photograph 6*.) The cables are pulled taut while seating the tube, so they are not pinched and damaged.

The outer tube is then guided through the hole in the

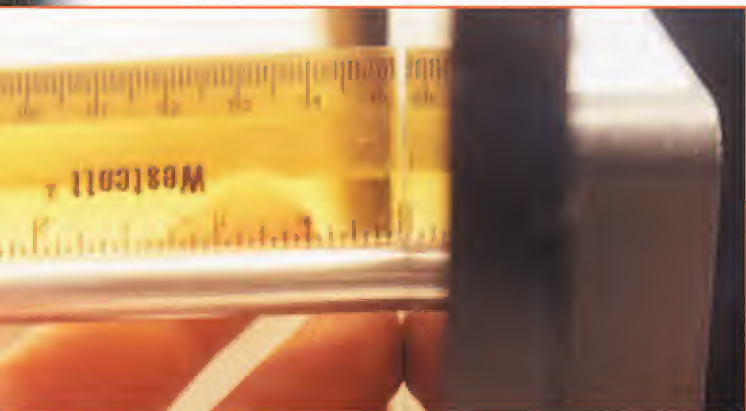




**7. The tube guided through the hole.**



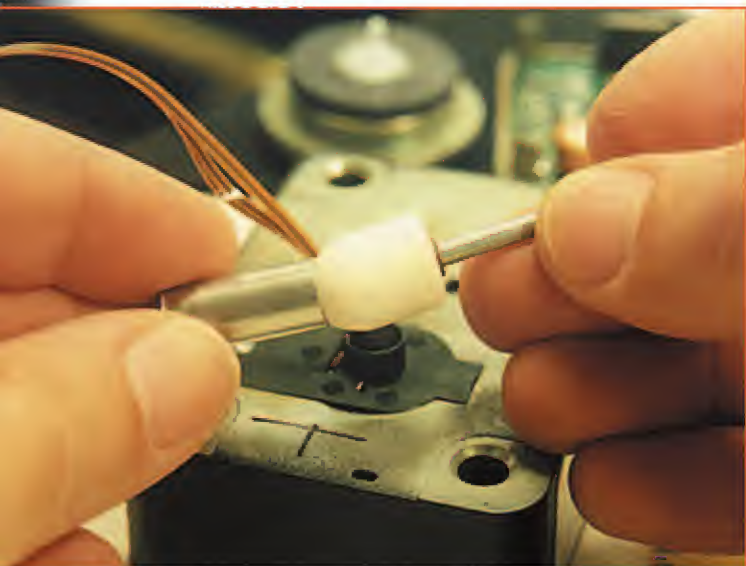
**8. The lock case attached to the container.**



**9. Measuring 5/16" to cut.**



**10. A small rubber clamp is used to hold the tube.**



**11. A deburring stone used to eliminate sharp edges. 12. There is a small cutout in the tube.**



container wall. *Photograph 7*, shows the tube being guided through the hole in the plastic lock mount, which represents the container wall. In *photograph 8*, the lock case is being attached to the container wall with the lock case mounting screws. The tube should be reasonably centered in the hole in the outside container wall. The tube is being held seated in *photograph 9*, while measuring 5/16" from the container wall and marking where to cut.

(firmly without crushing it) while cutting it to size. (See *photograph 10.*) The saw shown has fine teeth and is included with the lock. A deburring stone is used in *photograph 11*, to eliminate sharp edges.

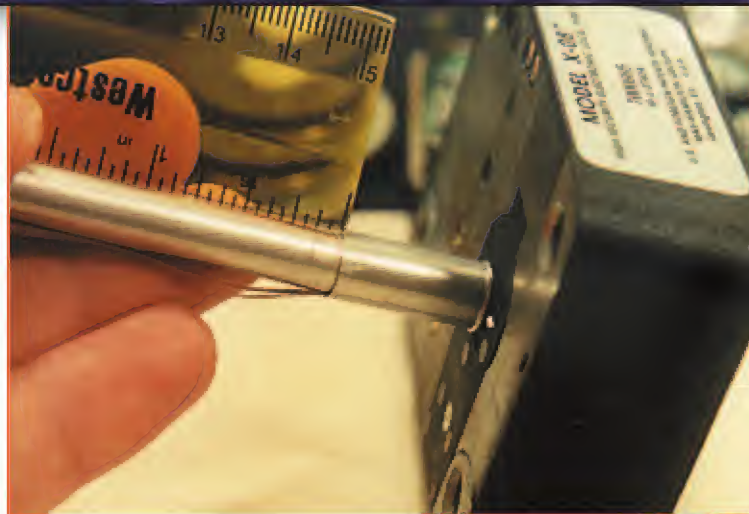
The screws attaching the lock case should then be removed, and the lock case should be taken off again. After removing the outer tube, the inner (smaller) tube is positioned into the lock case tube retainer. There is a small

A small rubber vise clamp is used to hold the round tube





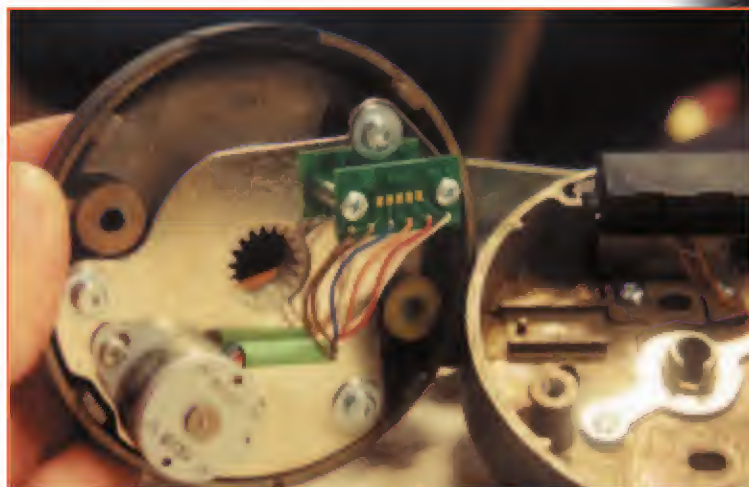
**13. The outer tube is slid over the inside tube.**



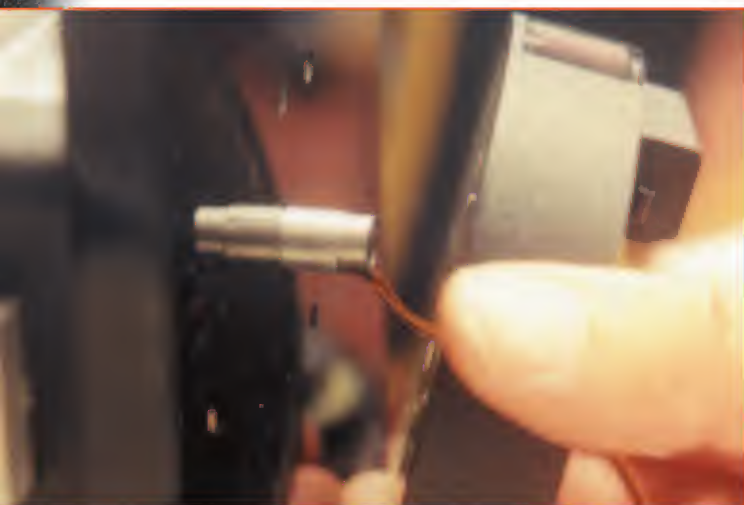
**14. Measure about 1/16 to 1/8 inch beyond the outer tube.**



**15. The lock properly positioned.**



**16. Two screws are unfastened and the cover removed.**



**17. The cables are fed through the center opening of the dial ring.**



**18. The dial ring being fastened to the container.**

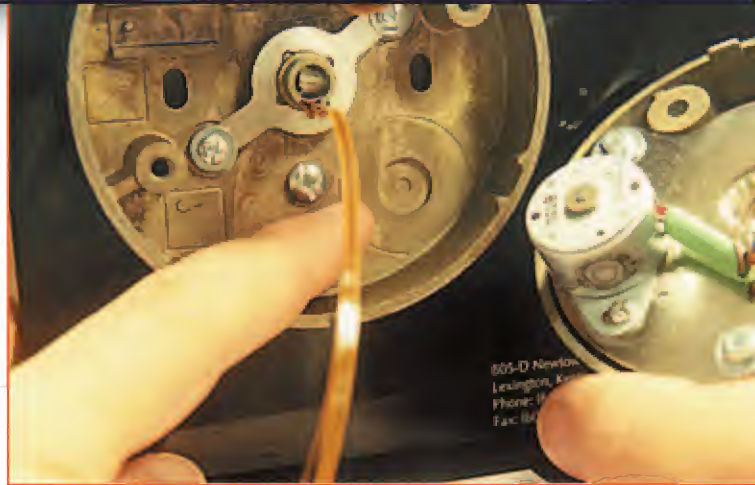
cutout in the tube, visible in *photograph 12*. That cutout aligns with the cables and allows the tube to seat completely in the tube retainer. The cables are then fed through the already cut outer tube, and the outer tube is slid over the inside tube as in *photograph 13*. Be careful not to crimp the cables.

With the tube fully seated in *photograph 14*, measure about 1/16" to 1/8" beyond the outer tube and mark the inner tube for cutting. After taking off the tube and cutting it to length, it should be deburred like the other one. While the lock assembly is still off, reattach the inner and outer tubes with the cables running in between them. The cutout for the inner tube should again align with the cables.





**19. There is some movement and flex in the tube retainer.**



**20. The imprint of a circle in the casting.**

Carefully guide the outer tube through the hole in the container wall, making sure both tubes remain seated and that no damage is done to the cables. With the lock properly positioned in [photograph 15](#), the lock case is attached with the four mounting screws.

#### **Installation of the Dial Ring**

The two screws from the dial ring assembly cover are unfastened and the cover removed. (See [photograph 16](#).) The cables are fed through the center opening of the dial ring as in [photograph 17](#). The dial ring is then placed over the ends of the tubes. The tubes must be properly seated in the tube retainer on the dial ring. [Photograph 18](#), shows the dial ring being fastened to the container with the dial ring mounting

screws. Make sure the tubes are properly centered in the hole before fully tightening the screws.

There is some movement and flex in the tube retainer, as can be seen in [photograph 19](#). Do not continue assembly, however, if the tubes are not within usable length. Make appropriate adjustments before continuing.

The cables will have to be routed so that parts on the dial ring cover do not cut or crimp them. [Photograph 20](#), shows the imprint of a circle in the casting in the lower right quadrant of the dial ring. That is considered the “keep clear” area because the generator will fit over that spot. Any cables positioned in that spot would be damaged by the generator (visible toward the left of the dial ring cover) when the dial



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#MOT - 2

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**21. I am holding one guide while the other is attached to the dial ring.**



**22. The rubber ZIF (Zero Insertion Force) seal.**



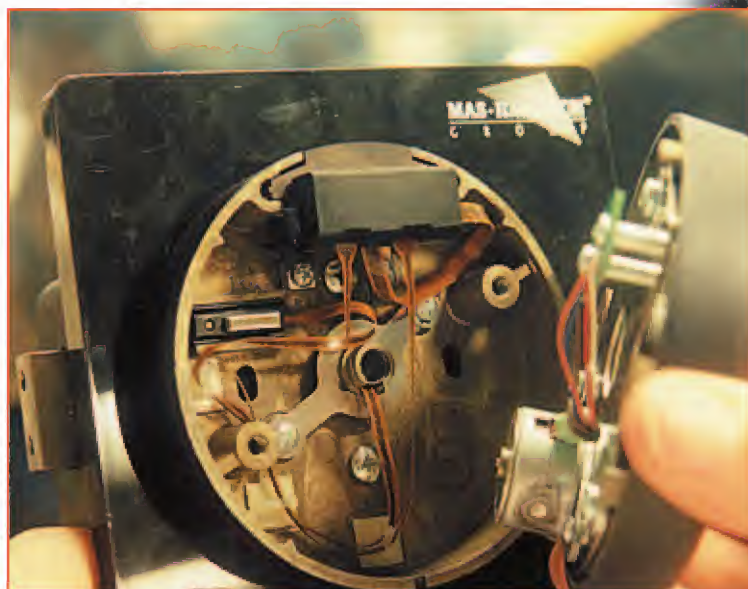
**23. The ZIF connector is closed by pushing upward.**



**24. The ZIF seal cover being closed.**



**25. The generator cable fits over a post.**



**26. The generator Zebra strip and strip holder is placed over the generator cable.**





**27. The dial ring cover is attached with two mounting screws.**

ring cover was attached. A number of stick-on cable guides are included to route and guide the cables. In *photograph 21*, I am holding one guide while the other is attached at about 6 o'clock on the dial ring.

#### **Installing the Cables**

The rubber ZIF (Zero Insertion Force) seal cover is opened in *photograph 22*, which exposes the two ZIF connectors. The ZIF connector at the right has the five conductor cable already attached. At the left, the four conductor cable is being inserted into the ZIF connector. The cables should be pushed in as far as they can go, with the bright metal tabs facing the LCD (the bright tabs are on the back compared to the view shown here). The ZIF connector is closed by pushing upward. (See *photograph 23*.) The ZIF seal cover is being closed in *photograph 24*.

The generator cable fits over a post in *photograph 25*, with the five gold tabs exposed outward. I am holding the Zebra



**28. Slide the spindle through the cam.**

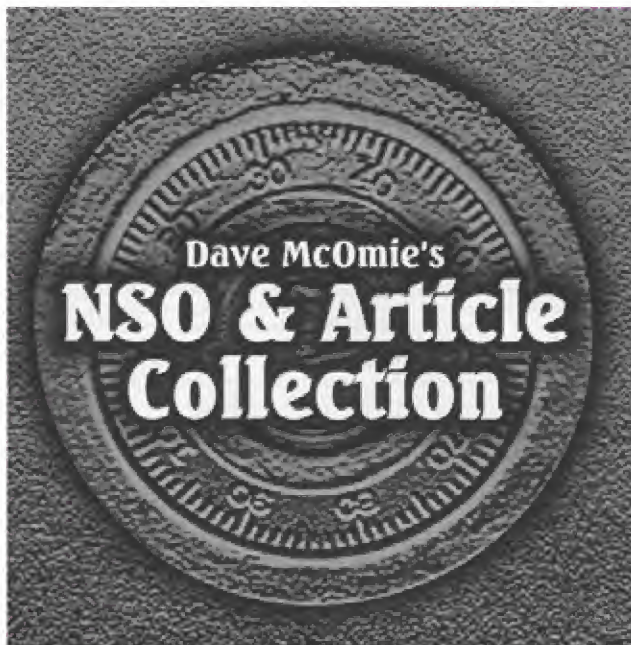
strip and strip holder, which come assembled at the factory. Reassemble if necessary. The Zebra strip is an electrical connector, and should be kept clean.

The generator Zebra strip and strip holder is placed over the generator cable and pressed into that recess. All the cables have been attached and routed through the cable guides in *photograph 26*.

The dial ring cover is ready to be attached. It should be aligned with the dial ring so that the generator is positioned at about 5 o'clock, and the four aligning lugs match the corresponding slots in the dial ring. The dial ring cover is attached with two mounting screws in *photograph 27*.

#### **Installing the Spindle and Dial**

Before starting the installation of the spindle and related parts, confirm that the stepper motor gear is properly positioned. Next, slide the spindle through the cam as in



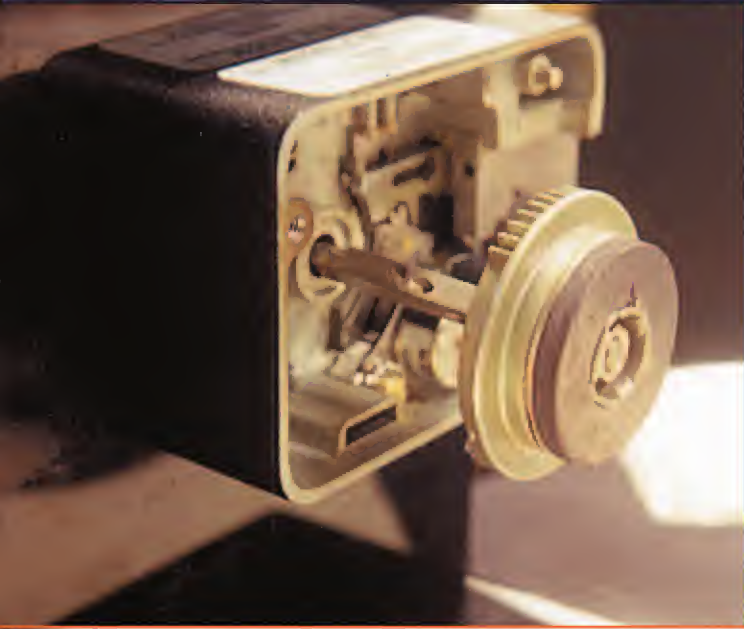
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#DMCD - 2





**29. The cam and spindle inserted into the lock case.**



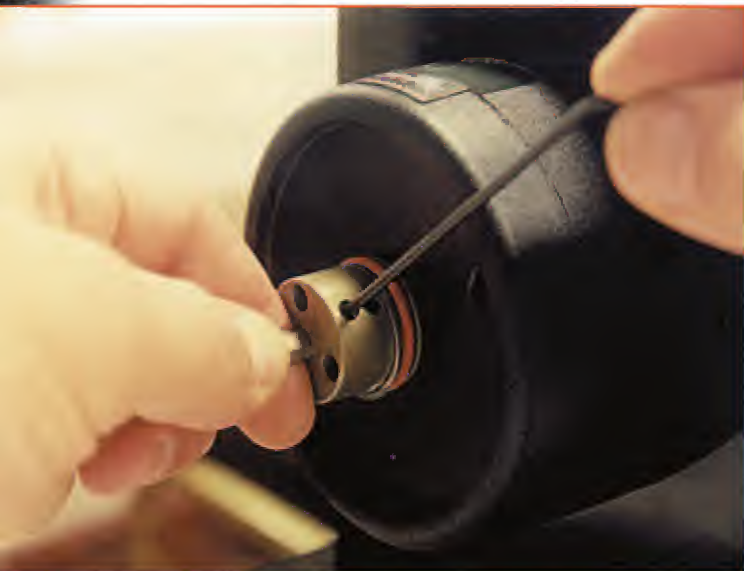
**30. The cam and spindle seated properly.**



**31. The dial, dial hub and a spare retaining ring.**



**32. The diamond shaped opening of the dial hub.**



**33. Tighten one of the two Allen head set screws.**



**34. I'm cutting the spindle to size.**





**35. If the spindle isn't cut cleanly, clean it up with a flat file.**

*photograph 28.* The cam and spindle are then inserted into the lock case in *photograph 29*. With the cam and spindle seated properly in *photograph 30*, it is time to assemble the dial hub and dial on the opposite side. *Photograph 31*, shows (left to right) the dial, dial hub and a spare retaining ring.

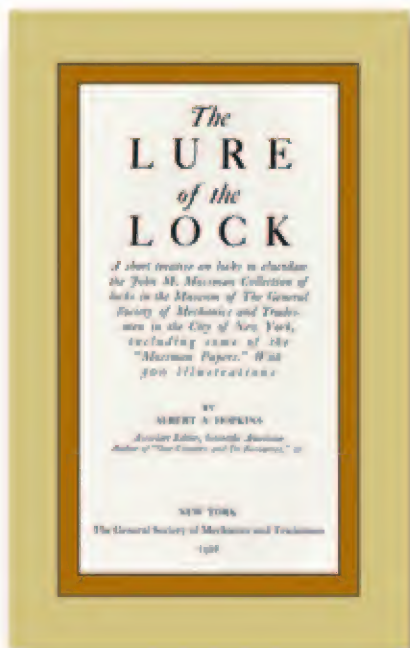
The diamond shaped opening of the dial hub in *photograph 32*, fits over the matching shape on the spindle. Slide the hub onto the spindle and position it so the hub aligns with the generator drive gear teeth. While pulling



**36. The hub removed and lubricant applied.**

outward on the spindle and positioning the hub snugly, tighten one of the two Allen head set screws. (*See photograph 33.*)

I'm cutting the spindle to size with the saw used earlier for the tubes in *photograph 34*, rather than the suggested hack saw. *Photograph 35*, shows a fairly clean cut. If the spindle isn't cut cleanly, clean it up with a flat file. The spindle should not protrude from the face end of the dial hub, because it might prevent the dial from completely



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#LURE





**37. A dial hub locating gage is positioned under the hub.**



**38. Lubricant is applied to the retaining ring, hub and inside the dial.**



**39. The dial is now attached.**



**40. The back cover is installed.**

seating onto the hub. The hub has been removed in [photograph 36](#), and lubricant applied. After lubricating, it is reattached.

A dial hub locating gage is positioned under the hub in [photograph 37](#). It is intended to create a gap of .010" of end play. The gage should be bent as shown to avoid spring action, which might tend to push the hub back off the spindle. Securely tighten both setscrews. 17-20 inch-pounds of torque is recommended (a minimum of 1 inch deflection of the handle of the Allen wrench). The inner set screw should be tightened first. After tightening both set screws, remove the dial hub locating gage.


Lubricant is applied to the retaining ring on the dial hub and inside the opening of the dial in [photograph 38](#). The retaining ring is positioned so that it doesn't stick out further on side or the other. The open gap of the ring should line up with the setscrews. There are three round tabs protruding from the inside of the dial, which should mate with the matching openings on face of the dial hub. The dial is placed carefully and squarely to the face of the hub and spindle. Even pressure should be applied to the dial until the retaining ring seats. The dial, now attached in [photograph 39](#), should not pull off the dial hub.

### Installing the Back Cover

Before installing the back cover, the white plastic baffle (shown in photograph 3) is reassembled over the spindle nut in the center of the cam. The back cover is installed in [photograph 40](#).

I didn't mention it earlier, but it is recommended that you use a wrist or grounding strap while handling the exposed back cover or the different electronic components or connectors, to avoid damage from ESD (electrostatic discharge). Similar concern should be made for touching the contact areas of the various cables, to minimize transfer of oils or dirt, which might negatively affect the connections.

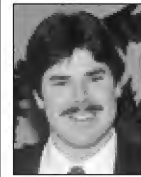
There is a back cover locking pin that is to be installed, but not until testing the lock first. Otherwise you might not be able to get the back cover off again. The locking pin would normally mount through the hole to the back cover shown in [photograph 40](#).

*I will explain the operation and programming of the X-08 in a later article. If you would like additional information about the X-08/ CEX-08 or other Mas-Hamilton products, call 800/950-4744. Circle #327 on the Rapid Reply Card. *



# the 1999 MITSUBISHI Galant

> PART TWO <



By  
Michael Hyde

*This month we conclude our coverage of the 1999 Mitsubishi Galant with the service coverage of the door locks, glove box lock and spec information.*

## DOOR LOCK

**1.** The door lock is part of the outside door handle. The door handle is made of plastic. It probably wouldn't take much to break out the lock cylinder with a large screwdriver.



**2.** To service the door lock cylinder you would need to remove the inside door panel.



**3.** Remove the screw hidden under the trim cap on the forward upper section of the panel.



**4.** Remove the screw located in the door pull cavity.





**5.** Remove the screw located in the trim cover for the inside door release lever.



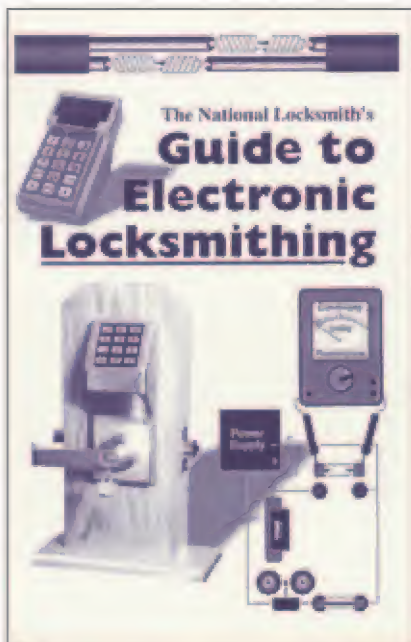
**6.** There are 2 screws on the rear edge of the door panel that must be removed, they are hidden under the trim caps.



**7.** You must remove the cover to the side mirror.



**8.** Once you unsnap the cover you will see three 10mm nuts. Remove the two forward 10mm nuts. The other one does not interfere with the panel removal so do not remove it. It holds the side mirror from falling off.



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#EL - 1





**9.** After the two nuts are removed you can slide out the plastic trim riser for the side mirror. Now the only thing holding the door panel is the standard plastic push-in fastener.



**10.** Unsnap the panel and remember to disconnect the wiring from the door to the panel.



**11.** Once the panel has been removed you can gently pull back the weather barrier. Avoid tearing it.



**12.** There is a large area to work in.



**13.** The lock cylinder is held into the handle with a wire clip retainer. Slide the wire clip to the side to remove the lock.



**14.** Mark the lock cylinder and the electrical connector so you remember which way it goes back on.





**15.** Once the lock cylinder has been removed from the car it looks similar to other late-model Strattec locks. The face-cap is reusable and slides off pretty easy.



**16.** Before removing the tailpiece mark the parts so you remember which way it goes back on.



**17.** The dust shutter assembly snaps and unsnaps from the cylinder plug. There is one spring that sits in the front of the plug always applying pressure to the shutter assembly.



**18.** There are eight tumblers, four from each side.



**19.** The door lock assembly.

GLOVE BOX  
 LOCK



**21.** The glove box door is pictured.



**20.** All the locks use the same tumblers. There are four depths.





**22.** Remove the two screws that hold the lock to the glove box door.



**23.** The glove box lock removed from the car.



**24.** On the rear of the glove box lock there is a small opening above the cylinder plug. If you look closely you can see the four regular tumblers and a retainer tumbler. The retainer tumbler is the most forward one. If you have a key, press down on the retainer tumbler and rotate the plug clockwise. If you do not have a working key, use the side of a pick to press down on all the tumblers and rotate the plug clockwise. Remember you are rotating clockwise if you are looking at the lock from the back side.



**25.** The glove box lock cylinder plug being removed.



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#ASA - 2000





**26.** The plug contains 4 tumblers in positions 5 through 8. The retainer tumbler is the one closest to the bow.

### KEY BLANK



**27.** The new Galant key has no shoulder and is longer than most others. There have been reports of the OEM keys being milled incorrectly. The key should not be wider than .330".



**28.** The key itself goes very deep into the ignition lock.



**29.** The code series runs from F 001-1571.

CODE SERIES: F 0001-1571										The keyblank should not be wider than .330" and the depths measured from the centerline of the key are: #1 = .161" #2 = .136" #3 = .110" #4 = .085"		
Bow	SPACING							Tip		DEPT HS		
1	2	3	4	5	6	7	8	Cut to Cut: .083	1 .322 2 .272 3 .220 4 .170			
.842	.759	.676	.593	.510	.427	.344	.261					
(Measured From Tip)												
Key Blanks:		Strattec: Master 598152 / Valet 322892										
Reed Codes:		N/A				HPC 1200 CM		N/A				
Curtis Clipper:		N/A				ITL MFG:		N/A				
NOTES:												

(Measured From Tip)				
Key Blanks:	Strattec: Master 598152 / Valet 322892			
Reed Codes:	N/A		HPC 1200 CM	N/A
Curtis Clipper:	N/A		ITL MFG:	N/A
Pak-A-Punch	N/A		M.A.C.S.	2
NOTES:				
<ul style="list-style-type: none"> <li>- There are no codes on this car.</li> <li>- There is a manual trunk release lever next to the driver's seat.</li> <li>- The ignition lock has a Active Retainer.</li> <li>- The locks for this car are made by Strattec.</li> </ul>				
Method #1	Remove and disassemble trunk cylinder, and decode wafers to make a master key.			
Method #2	Remove and disassemble door cylinder, and decode wafers to make a master key.			
Method #3	Impression locks.			

### NOTES:

- There are no codes on this car.
- There is a manual trunk release lever next to the driver's seat.
- The ignition lock has a Active Retainer.
- The locks for this car are made by Strattec.

#### Method #1

Remove and disassemble trunk cylinder, and decode wafers to make a master key.

#### Method #2

Remove and disassemble door cylinder, and decode wafers to make a master key.

#### Method #3

Impression locks.

**TNL**



# GETTING INTO COMBINATION PADLOCKS

by Sal Dulcamaro, CML

## PART FIVE

In this final installment of articles on combination padlocks, I will be covering just one kind: the Sesamee resettable lock from CCL (Corbin Cabinet Lock). A few installments back, I took a Master resettable lock completely apart to show the inner workings. The Sesamee is similar inside, but not the same. Many of the general characteristics will be the same, although arranged a bit differently.

### What Makes the Sesamee Tick?

*Photograph 1*, shows a slightly older Sesamee padlock with the main assembly of the inner workings (or housing) removed. Within the open cavity of the lock case, you can see the two spring-loaded locking bolts. Running between them is the bolt spring and alignment pin, which help to push the two ends outward into the cutouts in the shackle. I am holding the shackle down in the locked position because the shackle spring has much greater force to push the shackle outward, than the bolt spring to lock it in. Like the Master lock, the Sesamee stays locked when the narrow top of the locking plate wedges between the two bolts.

*Photograph 2*, shows the tilted position of the locking plate that would lock the bolts if the housing was assembled inside the lock case. The round surfaces of the cams cause the plate to tilt that way.

To unlock the lock, the wheels must be turned so that the flats of the cams are positioned just below the

plate. With the plate removed, *photograph 3*, shows the flats on the cams where the wheels are positioned to unlock the padlock. When the top of the plate is wedged between the bolts, the bottom end of the plate cannot overcome the binding force to drop into the flats of the cams and unlock the lock. To accomplish that, the shackle must be pushed in slightly so the two bolts can spread a bit and release the narrow top of the plate. Then the legs at the bottom end of the plate can drop into the flat surfaces of the cam, causing the narrow top of the plate to completely move up and out of the path of the bolts.

### Resetting a Combination

The cams move with the mating numbered wheels. Two cams are apparent in *photograph 3*, just to the right of the first wheel. The other two cams can be seen next to the third wheel. The cams are tied to the motion of the wheels, with the first wheel controlling the cam immediately to its right and the second wheel controlling the cam to its left. Likewise, the third wheel moves along with the cam to its right, while the fourth wheel moves with the cam to its left. Each pair of cams are side by side, but both are much closer to the left side wheel than the right side wheel.

The view of the numbered wheels shown in *photograph 3*, would normally be concealed by the side surface of the lock case. To reset the combination, it is necessary to separate the movements of the wheels and the cams that they control.

In *photograph 4*, I'm using my thumb to push in a spring-loaded pin to the left of the wheels. If the lock was assembled, a tool would fit into a shackle hole, and push the pin in to disengage the cams from the wheels to reset the combination. Notice that each pair of



**1.** A slightly older Sesamee padlock.



**2.** The tilted position of the locking plate.





**3.** The flats on the cams.

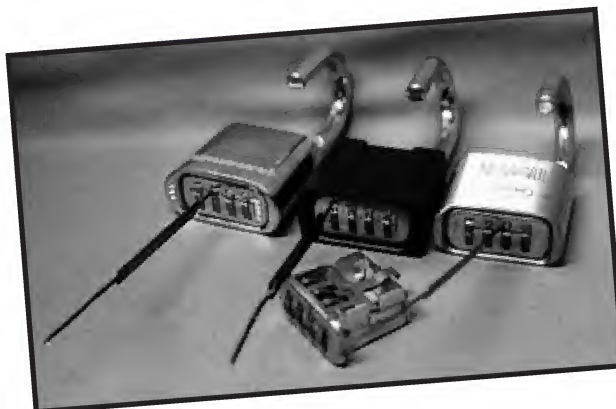


**4.** My thumb is pushing in a spring-loaded pin to the left of the wheels.



**5.** The Weiser shim pick slides through one of the gaps.

**6.** Three different Sesamee padlocks that were opened.



cams is almost exactly centered between each pair of wheels. While the wheels and cams are disengaged, the wheels can be rotated to other positions to reset the combination. When the spring-loaded pin is released, the wheels and cams reengage to set the new four-digit combination.

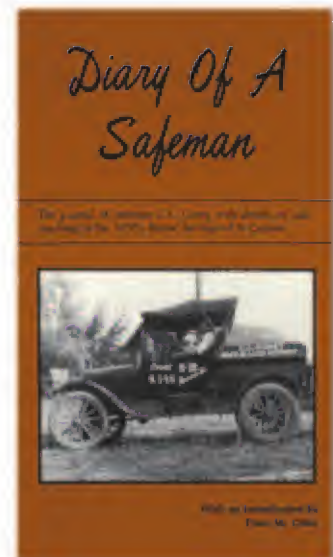
### Opening the Sesamee

The recommended way to open a Sesamee padlock is to rotate the four wheels to the proper opening combination, and then push in on the shackle and let the shackle just push back out. In the second installment of this article series, I demonstrated how to use a Weiser shim pick to open a variety of multi-wheel resettable combination padlocks. The Sesamee was one of few brands that opened fairly easily.

Photograph 5, illustrates exactly what happens inside the lock case to open the lock without knowing the combination. The Weiser shim pick slides through one of the gaps next to a numbered wheel. The tool is then inserted deep enough to allow the shim pick to go under the cross bar of the locking plate. The photograph shows the narrow top end lifting upward. Because the top of the locking plate is typically wedged by the two spring loaded locking bolts, the shim pick is not usually strong enough to lift the plate against that force. The way to open the lock is to push in on the shackle to relieve the binding force, as you lift up the locking plate with the shim pick.

I have heard that CCL had tightened up the manufacturing tolerances to close the gaps where a shim pick could insert. In my experience, I have found that many newer Sesamee padlocks do have slightly tighter gaps than the older ones. However, I've had decent success opening most of them in less than a

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#DIARY



minute. *Photograph 6*, shows three different Sesamee padlocks that were opened with a Weiser shim pick. The first two padlocks on the left are newer style Sesamee padlocks, while the one on the right is an older style lock. The first lock was opened with the shim pick entering to the left of the second wheel. The second lock succumbed with the shim pick being inserted to the right of the first wheel. The third lock was opened with the tool being inserted to the left of the third wheel.

I have found that it generally doesn't matter which wheel that the shim pick is inserted to actually open the lock. My suggestion is to find the wheel with the biggest gap and try to insert the tool there. The shackle must be pushed in slightly as the shim pick is very thin and not strong enough to lift a securely wedged lock plate. I did not have 100 percent success. Some (both new and older) Sesamee padlocks had gaps too small to insert the Weiser shim pick.

### **Decoding the Sesamee**

While doing some earlier experimentation with the smaller versions of the resettable combination locks, I seemed to be able to manipulate the locks to the correct combination for opening. I use the term "seemed" because I'm not entirely sure if that, or something else was actually occurring. I'll explain the basic process that I used

and what I "thought" was occurring when I decoded the locks.

I've already indicated in this article series that the resettables do not unlock by moving the wheels to the correct combination and then pulling out on the shackle. In contrast to most other padlocks (combination and otherwise), after entering the correct combination, you push in on the shackle to open it. Pushing in removes the binding pressure of the bolts on the top end of the locking plate. If the correct combination is in place, a short spring will push the bottom end of the locking plate against the flat spots on the cams. When the bottom half of the plate tilts downward, the top half tilts up and moves out of the way. With that part out of the way, the force of the shackle spring pushes the shackle back out, compressing the two bolts and allowing the shackle to come completely out.

Realizing what I just indicated, I surmised that even without the combination set to the correct numbers, pushing in on the shackle would still release the binding pressure holding the top end of the locking plate. I concluded that the spring that normally pushes on the bottom half of the plate would still have to push the plate down to contact the cams. Even though it was likely that most of them would be positioned with the round surface facing the plate rather than the flat surface. I wondered whether or not it was possible to feel which of the four (or three for the smaller locks) cams was making contact first. Then I would manipulate each wheel until I could feel some downward motion when I got to the number that caused the flat spot to be aligned with the locking plate. Presumably, I would go to the next cam that made contact and one by one manipulate each wheel until I found all the correct numbers.

I tried exactly that. After a short time, I found myself "feeling" the combination to each of the locks. With the small locks, it was extremely subtle sensations, but I seemed to develop a knack for it. I decided to try the larger locks, and specifically the Sesamee, because it had always been one of the trickier locks to deal with. Repeating the same basic procedure as with the smaller locks, I was soon flabbergasted by what seemed as almost loud and overwhelming sensations as I found the correct combination.

I would squeeze the shackle inward and move the wheels one at a time with the lock to my ear. After feeling and hearing all four-wheel positions click into place, I would release the pressure on the shackle and the lock would pop open. I did it over and over, in some cases in a matter of mere seconds. For the time, I was content that I had conquered the Sesamee padlock. It was almost as if I could do like the old fairy tale and command "Open Sesamee", and like magic, it would open. It was some months before I tried to repeat the process again. Ultimately, I discovered what was really happening.

### **The Revelation**

Some time afterward, I tried to manipulate the small resettables again. I tried endlessly in vain, and could no longer hear or feel what I had before. I was spoiled by the Sesamee lock, which seemed to virtually scream out the combination. The much quieter sounds and sensations generated by the smaller locks were no longer within my hearing range. I pulled out some Sesamee locks and continued where I had left off months earlier. The locks were still opening just as fast. Then I tried another lock that made the exact same sounds and sensations, but when I pushed in on the



**7.** See the recessed notches in the wheels.



**8.** The tool I made to keep the shackle compressed.



shackle, it did not pop back out in the unlocked condition.

Then I made a revealing discovery. All the locks that I had opened successfully were still set to the factory combination of: 0-0-0-0. The ones that didn't open had been changed to some other combination. I suddenly realized that the sounds and sensations generated, somehow indicated that the number "0" was in position. When the lock was set to all zeroes, the combination I was feeling also unlocked the lock. When it was set to something else, it just gave me the ability to feel the combination of all zeroes without looking at the wheels. At that point, I finally realized that my technique only helped find the zeroes, not the actual combination (unless, of course, the combination was all zeroes). I still didn't know what was causing the lock to reveal that information.

After wracking my brain for a long time, I discovered what caused the sounds. The lock had given me another clue that might have led me to the answer sooner, but I didn't connect the two characteristics together. In *photograph 7*, you can see the recessed notches in the wheels that separate each number. If you look closely at the first and third wheels, you will see a differently shaped notch just above the currently set numbers (both are number 4).

There is a part in the lock called the stop lever plate which rides on the wheels and catches in the notches so the numbers will tend to catch on a specific number rather than somewhere between numbers. There is a slight clicking sound when each new number is facing forward on the combination display. Each notch just above the number 4, is slightly deeper and shaped so that when it catches it makes a somewhat louder sound. That notch catches when the number 0 is facing forward. That is what made the sound that I heard so clearly.

The other clue that I didn't recognize earlier, was that if you rotate the wheels in ascending order (that is: 0, 1, 2, 3, 4, 5, etc...), you can rotate the wheels over and over in that direction without stopping. If you rotate the wheels in descending order (9, 8, 7, 6, etc...), when you get to 0, you can not turn it back to number 9. The deep notch above the number 4 has a vertical rather than angled surface toward its

bottom, which allows it to rotate in only one direction.

That means when the 0 is facing forward on the display, it can count upward to 1, but not downward to 9. Every other notch position allows rotation in both directions. The purpose of this is so the padlock can be opened in the dark by feel. The sound and feel indicates that that wheel is positioned at zero, allowing the user to count the combination rather than see it.

### **Methods for Decoding the Sesamee Padlock**

I developed a method for decoding the Sesamee padlock, but for some it may be impractical because it requires drilling holes in the lock body. I needed a way to keep the shackle pushed inward without having to constantly squeeze it together with my hand. The spring pressure I was going against was fairly strong and after a while my hand started to cramp up. *Photograph 8*, shows the tool I made to keep the shackle compressed. It's a bent metal rod that fits tightly enough to keep the shackle pushed down far enough to release the binding pressure on the top of the locking plate.

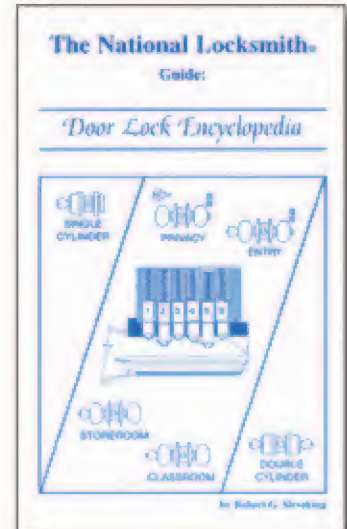
I drilled two holes on the side of the padlock in line with the legs of the locking plate. I made the holes just large enough for a stiff tool to enter the hole and apply pressure to the locking plate. Rather than relying on the spring pressure inside to push the locking plate against the cams, I applied direct pressure to the leg of the locking plate while rotating the wheels. (See *photograph 9*.)

I found which wheel bound first and turned it until I could feel the leg grab the flat spot on the cam. I repeated the procedure with the other three wheels until I could feel the locking plate push downward into all four flats of the cams. At that point, I didn't need to hold the locking plate down since the spring inside the lock maintained the pressure. With my bent metal rod tool holding the shackle down, the top of the locking plate was not been wedged in place. The bottom of the plate could then move freely once the flats of the cams were positioned.

### **Other Decoding Methods**

Another method for decoding the Sesamee has been around for a long

## **Door Lock Encyclopedia**



The ability to remove a lock from a door, disassemble the mechanism, and remove the lock cylinder for service is not always a simple straight-forward task.

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#DLE

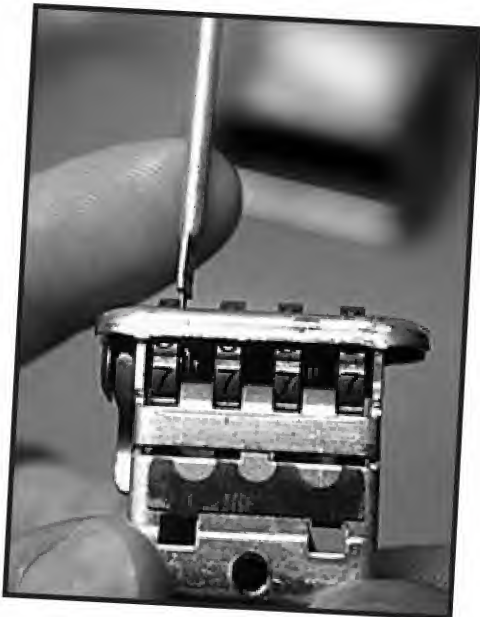




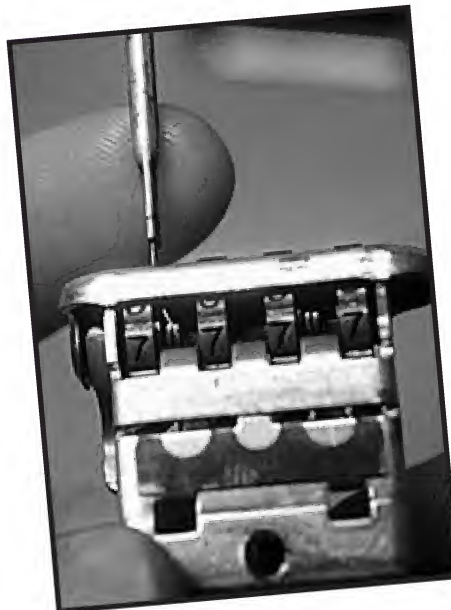
**9.** I applied direct pressure to the leg of the locking plate.



**10.** There is one hole drilled between the first and second wheel, and a second hole drilled between the third and fourth wheel.



**11.** The smaller curved shim fits into the gap to the right of the first wheel.



**12.** The tip makes contact with second cam.



**13.** The tip of the tool is riding under the round part of the cam.



**14.** When the tip makes contact with the flat spot the handle drops.

time, but it also requires drilling holes in the padlock. *Photograph 10*, shows the bottom of the padlock. There is one hole drilled between the first and second wheel, and a second hole drilled between the third and fourth wheel. The holes are drilled in these locations because the cam is located in these two locations. If you look back at *photograph 3*, you will see the cams located there.

Once the viewing holes are drilled, rotate each wheel and observe through the opening until the flat spots on the cams faced forward. The number facing you when the flat is forward is not the correct number for the combination. The flat must face the locking plate, so you will need to transpose numbers. You should subtract either three or four numbers from what is displayed.

The flat spot will not be perfectly parallel with the number display surface of the lock. For that reason, you might have the flat angled one direction or the other "approximately" facing forward. If they are all angling the same way, you can always rotate the numbers as a group if you didn't transpose the numbers a sufficient number of stops. For example if the display reads: 3-4-6-5, you can make sure the position of the flats stays coordinated by adding one number to each digit (at a time) and testing the combination again. The cams would stay relative to each other with the following combinations: 4-5-7-6, 5-6-8-7, 6-7-9-8, 7-8-0-9, 8-9-1-0, 9-0-2-1, etc...

The final decoding method involves a tool originally made by ESP. I don't know if ESP still makes the tool or if any other company makes a similar tool, but I will describe how it works. Look back at *photograph 10*. Besides the drilled holes in the lock, you will notice a long narrow tool just above the padlock. The tool has two narrow spring steel ends with two different degrees of curve to make contact with the cams for the various wheel positions.

In *photograph 11*, the end with the smaller curve fits into the gap to the right of the first wheel and rides just below the cam that moves with that wheel. If you look closely, you may see the tip of the tool touching the first cam. When using the other end of the tool with the greater curve, the tip makes contact with second cam. (See *photograph 12*.) That cam



moves along with the rotation of the second wheel. With both cams all the way to the left, both ends of the tool insert in the same location to feel the cams. Tool insertion is similar for the third and fourth wheels. Both ends of the tool would be inserted in the gap just to the right of the third wheel.

When the tip of the tool is riding under the round part of the cam, the tool remains upright, as in *photograph 13*. As you rotate the wheel, if the round part of the cam is still on the bottom, the tool will remain in this position. When the tip makes contact with the flat spot on the cam, the handle of the tool will drop downward, as in *photograph 14*.

The number displayed when the handle drops is not the number that will open the lock. Remember that the locking plate is on the opposite face side of the padlock. The tool drops when the flat is down, but the flat must be up to contact the locking plate. Because each wheel has ten digits: 0 to 9, you have the option of either adding five to or subtracting five from the number displayed.

I tried using this tool many years ago with hit and miss luck, before I knew what was inside the Sesamee lock and how it worked. I know now that sometimes the tip will slip off the particular cam being decoded. Previously, that condition (which sometimes also let's the handle drop down) gave me false indicators of the combination. Now that I know what the tool is trying to check, I can compensate for such things. Some of the newer locks with slightly tighter gaps will still allow the tip to go in, but the tightness will not allow gravity to pull the tool down when the flat appears. The weight of the handle is not enough to overcome the snug fit inside the gap. By gently pushing down on the handle, you can sometimes feel the flat spot. Then again, you will have to transpose the numbers by five and get the opening combination.

### **Final Thoughts**

This article series was one of the toughest I've ever worked on. The experimentation, time and effort tested my limits at times. I learned an awful lot, though, that I didn't know before. I hope my effort will benefit those who can learn from my experiences. **TNL**

# Antique Padlocks

The National Locksmith

Guide to:

*Antique Padlocks*



by Jack Roberts, CML

Finally there is a book to give you all the information you need about old interesting locks.

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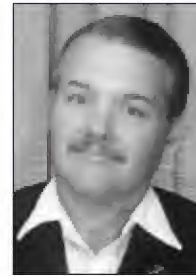
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May 2000 • 45



# BEGINNER'S CORNER

## Schlage H185 Hotel/Motel Lock



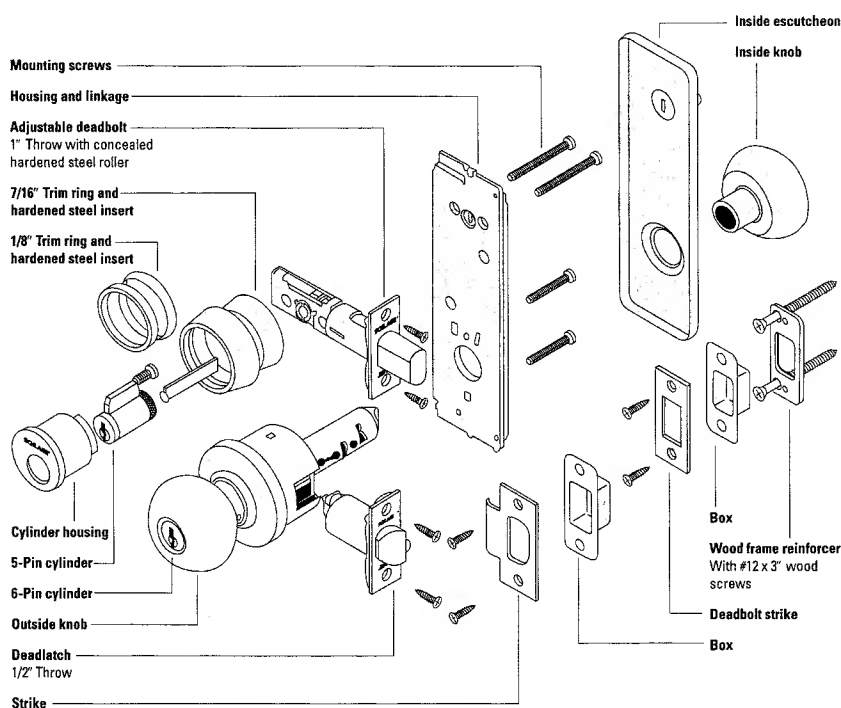
by  
**Jim  
Langston**



1. The Schlage H185 Hotel/Motel lock.

### H-Series

Exploded View - H153



A. An exploded view of this hotel lock.

If you have ever serviced a cylindrical hotel lock, you know it is completely different from your usual cylindrical lockset. In this issue I will cover how to service the Schlage H185 Hotel/Motel lock, which is an interconnected knoblock/deadbolt combination. (See photograph 1.)

The H185 outside knob is always in a fixed locked position (similar to a storeroom function) and can only be opened with a key. It cannot be left unlocked. A SCHLAGE SC9 or A1145E blank operates the cylinder.

There is a push button on the inside knob and when pushed in, activates a visual occupancy indicator (a pin in the face of the knob). A pin extends past the face of the cylinder, indicating that the door is locked from inside.

When the occupancy indicator is extended, it prevents any key from entering the keyway. Only a specially milled key will override the lockout feature. This key bypasses an obstruction pin in the lock allowing emergency entrance. The key is a Schlage part number 35-102. It can be ordered from your distributor.

To release the occupancy indicator, simply turn the inside knob. An exploded view of this hotel lock can be seen in illustration A.

On the interior knob button you will notice two holes side by side. (See photograph 2.) By using a small spanner wrench on the inside of the knob, you can turn the button locking the occupancy indicator in place. This would require the use of the emergency key to unlock and would not release when the inside knob was turned or the door closed. It is in a permanent lockout state until the inside button is rotated back.

An exploded view of an A85PD cylindrical hotel function lock, which is very similar to the H185 knoblock portion, can be seen in illustration B.

Photograph 3, shows the inside execution plate. The unit under the execution plate is called a linkage housing. This housing is a sealed unit



and can not be worked on. This unit will withdraw the deadbolt from the locked position when the inside knob is turned. From the outside a key is required to lock and unlock the deadbolt.

In *photograph 4*, I am pointing to what is called a driver tab. This tab fits into the slot on the knob housing shown here. When you assemble the lock body into the housing, it will allow the driver tab to turn and

activate the linkage housing unit. This is what withdraws the deadbolt. From the outside the knob lock will not open the deadbolt.

If you pick this lock to open, you must maintain pressure on your turning tool once picked or the cylinder will relock automatically and will need to be picked once again to open. Once picked, open the door before releasing the turning tool.

*Photograph 5*, shows the occupancy indicator pin that protrudes from the face of the lock when the inside button is depressed. With the cylinder apart you can see the rear view of this spring-loaded occupancy pin. (See *photograph 6*.)

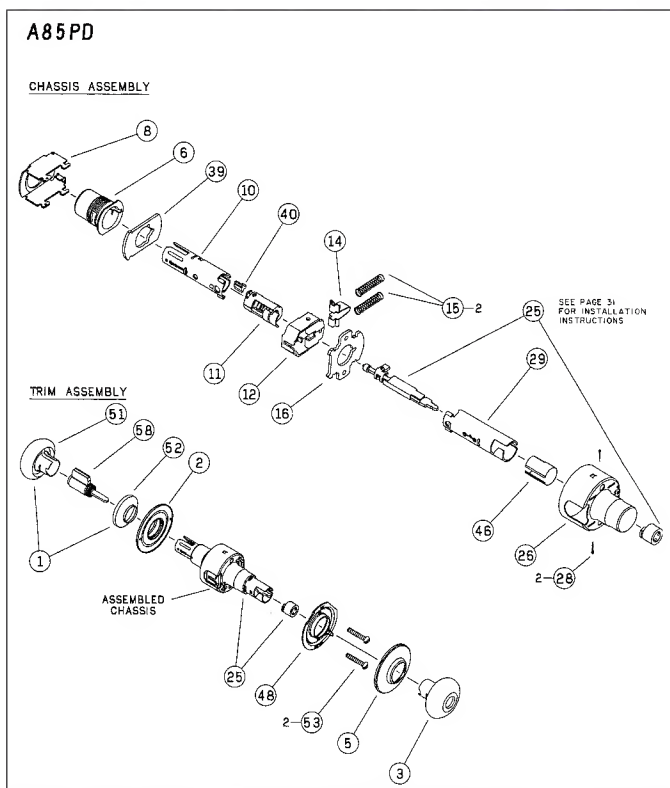
In *photograph 7*, I am pointing to where the obstruction pin goes. There is a small hole where this pin resided. When the occupancy indicator pin is



**2. On the interior knob button you will notice two holes.**



**3. The execution plate is called a linkage housing.**



**B. An exploded view of an A85PD cylindrical hotel lock.**



**4. This tab fits into the slot on the knob housing.**



**5. The occupancy indicator pin.**







by  
**Richard  
Allen  
Dickey**



# The **medeco** **SiteLine**

## **SINGLE DOOR CONTROLLER**

**M**edeco® has introduced a new electronic, single door controller called SiteLine™. This controller is designed with the small to medium size business in mind. It will allow electronic access with an audit trail and it can be integrated into an existing Medeco high security lock system. Last month we covered the components of the SiteLine system and then went on to look at some of the systems capabilities. This month we will cover how to install the software into your computer and the steps involved to program the SiteLine single door controller.

### **Software Installation**

Let's start off with the software installation and a few of the steps involved in setting up a SiteLine door controller. The computer that will be used for the SiteLine software installation must be running Windows 95, 98 or NT operating systems.

The first step is to attach the hardware to the computer. The SiteLine reader/programmer is connected to one of the available com ports on your computer. (See *photograph 1.*) To run the SiteLine software, the programmer must be connected and the red key must be inserted into the programmer. The holder of the red key is the only person able to start and edit the SiteLine software.

The next step is to get the software into the computer. The software comes on a CD-ROM disk. (See *photograph 2.*) After you go through the normal start up procedure for your computer, insert the SiteLine CD into your drive.

There are several ways to install the software, but I will only tell you about the process described in the software installation manual. If you have a favorite process, go for it.

1. Click the "Start" button in the bottom left hand corner of the screen.
2. Choose the "Run" option.
3. Type: ?:\setup. Substituting the "?" with the drive letter of your CD-ROM reader. For example: D:\setup if D is your CD rom drive.

The first thing you will probably see is a message informing you that



**1. Key reader/  
programmer connected  
to computer with setup  
key inserted.**

## **Part 2**

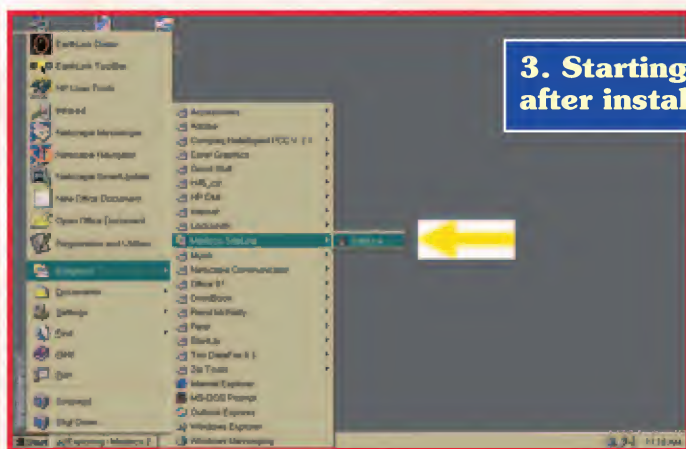
some of your files are out of date. If this happens, press "OK" to update the files and then select "Yes" when you are asked "Do you want to restart Windows now." If your files did need updating and you have to restart your computer, you will need to go back to step #1 after your computer restarts. Once the software installation program is running, all you have to do is click the usual places and everything takes care of itself.

After the software installation is complete, you will start the SiteLine

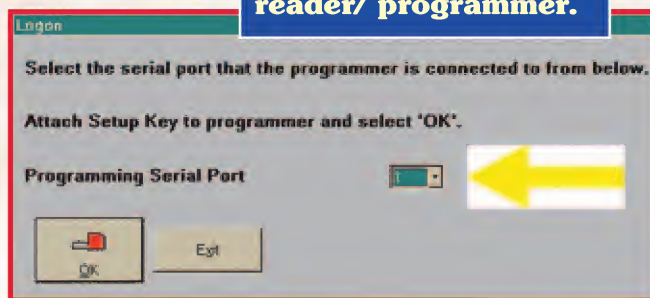


**2. SiteLine users  
manual with CD-ROM.**





3. Starting the software after installation.



4. Selecting com port used for the key reader/ programmer.

program like you would any other windows program. Go to "Start", "Programs", "Medeco SiteLine" and click on "SiteLine". (See photograph 3.)

The first thing that happens is the program will open a login screen that allows you to choose which com port the hardware (key reader/programmer) is connected to. (See photograph 4.) After choosing the com port, insert the red key into the reader just like it appears in photograph 1 and click "OK". The software will look for the "Red" key in the programmer. If it is not there, this is as far as you go. If the red key is

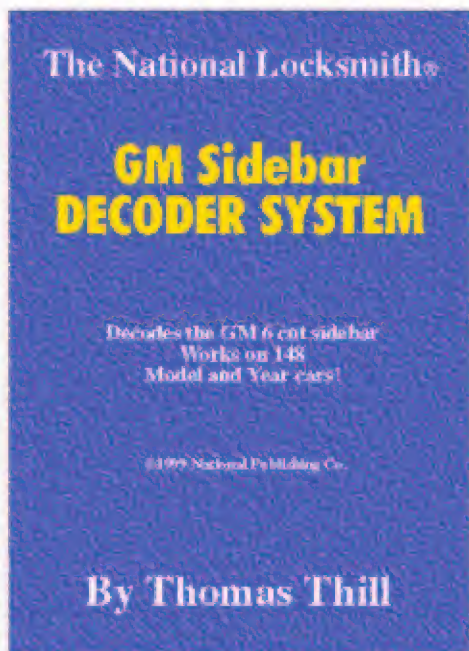
there, a "Quick Setup Steps" screen will appear.

The "Quick Setup Steps" screen will walk you through the necessary section of the software. (See photograph 5.) After these steps are completed, you will have a fully functional system. Lets go through the basic steps involved in setting up the system.

The first button on the quick setup steps screen is the "Setup Access Schedule" located in the upper left. (See photograph 6.) The setup access screen will allow you to decide what hours access will be allowed. You can

program 3 of the 5 schedules in half-hour increments. Schedule "0" (see photograph 7) and "4" (see photograph 8) are preset to no access and unlimited access respectively.

As you can partially see in photograph 9, I have allowed access from 6:00a.m. to 6:00p.m., Monday through Friday with no access on Saturday and Sunday. Remember that anyone who is assigned to schedule "4" will have access 24 hours a day 7 days a week. Click "Save and Exit" to save your new information and return to the "Quick Setup Steps" screen. (See photograph 9.)



## GM Sidebar Lock Decoder System

Tom Thill, the author of a new book, has invented an amazing new way to make keys for six cut GM Sidebar Locks.

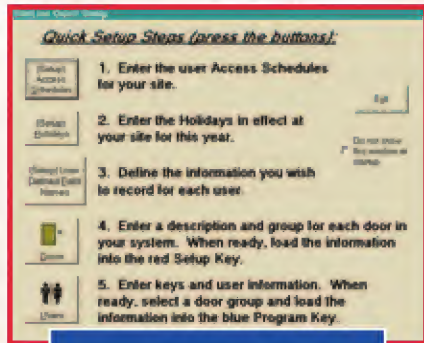
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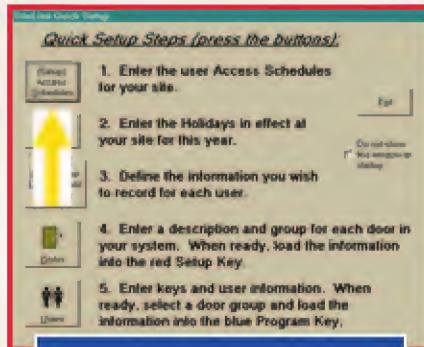
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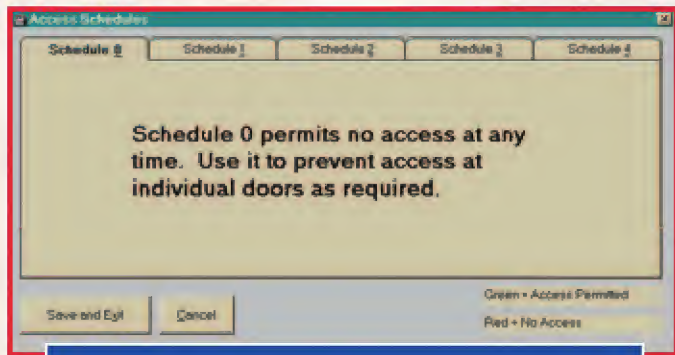
Your next task is to setup a holiday schedule if you need one. Click "Setup Holidays" and you will be able to enter any excuse for a day off that you can imagine. (See photograph 10.) If you get



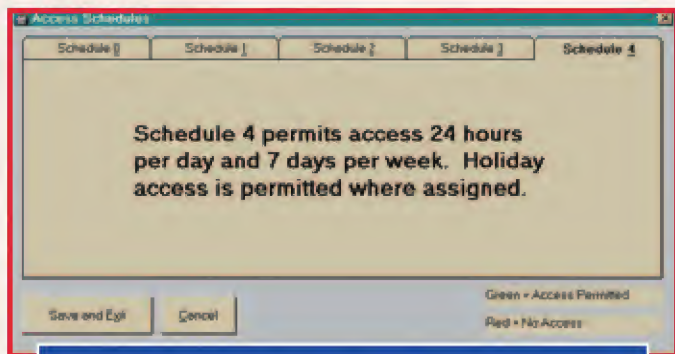
**5. The Quick Setup Steps screen.**



**6. Getting to the Setup Access Schedule.**



**7. Schedule "0" allows no access.**



**8. Schedule "4" allows 24-7 access.**

56 • Visit [www.TheNationalLocksmith.com](http://www.TheNationalLocksmith.com)

away with this one, let me know what you called your holiday so I can try the same excuse. Click "Save and Exit" to save your new information and return to the "Quick Setup Steps" screen.

The next section to complete is the "Setup User Defined Field Names". Clicking this button will take you to an area that will allow you to name the types of information you want to track. (See photograph 11.) There are two default fields called "Key" and "Name" as well as the 8 fields that you can name. This extra information can be anything from license plates to department names. You will put information into these fields a little later from another screen. When finished, click "Save and Exit" to save your new information and return to the "Quick Setup Steps" screen.

The fourth section that needs information is the door parameter screen. Click "Doors" to enter the door parameters screen. (See photograph 12.) There are two sections to this part of the programming. In the first part there are seven fields for each door with a maximum of 255 doors. Each door controller will have a different door number and a door description that we can assign. The seven fields include the following information:

1. Door Number: The door number is automatically assigned.
2. Door Description: The door description can be anything you like. Numbers, letters or a combination of both.
3. Door Group: You can have up to 255 groups, but you will probably use only a few.
4. Door Unlock

Time: This determines how long the door stays unlatched after a valid key is used.

5. Door Held Open Time: This setting will determine how long the door can stay held or propped open before it is considered a violation.

6. Audit Exit Button: If you need to audit how often a request to exit button is used, an "X" will enable this audit option.

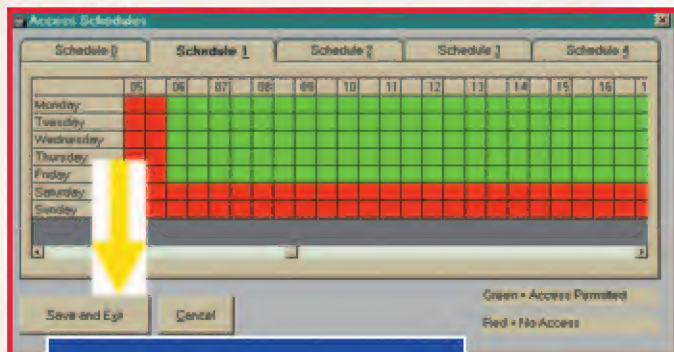
7. Audit Door Held Open: If you need to audit how often a door is held open, an "X" will enable this audit option.

In the bottom right hand corner of the "Doors" screen is a button called "Set Up Doors." To actually program the door controller, you need to go to this screen. (See photograph 13.) There are three steps and several options to choose from.

1. Step one allows you to select global or individual setup. The "Global" is used to initialize numerous doors with generic information or to update date/time, holidays or schedules. The "Individual" is used to initialize or update parameters for a specific door controller. I am going to choose the "Global" option and take the easy way out.

2. Step two writes information to the setup (red) key. The information that will be written is displayed on the left side of the screen. To write the information to the key, insert the red key into the key reader/programmer and click the "Write to Key" button on the right side of the screen. The following information will be written to the key.

- Door unlock time.
- Door held open time.
- Audit exit button (yes or no).
- Audit door held open (yes or no).
- Access schedules
- Holidays



**9. Editing schedule "1".**



• Current time and date from the computer. The red key will actually keep real time while you are taking it from the computer to the door controller so the time that is loaded into the door controller is the exact same time as you have in your computer.

3. The third step is to take the key to the door or doors that need programming and insert the key into the reader. If things are working like they are supposed to, the door controller will chirp until all of the data is transferred. When the chirping stops, the LED should turn green. Remove the key and the LED will turn red indicating things are normal. It is very important that the red key is held firmly in place while the data is transferring to the controller. If the transfer is not successful the LED will blink red and the reader will beep twice.

When finished, click "Exit" to return to the "Door Setup Parameters" screen and then "Save and Exit" to save your new information and return to the "Quick Setup Steps" screen.

The last thing to do is add users to the system. From the "Quick Setup Steps" screen, choose "Users" to go to the "User Data and Privileges" screen. (See photograph 14.)

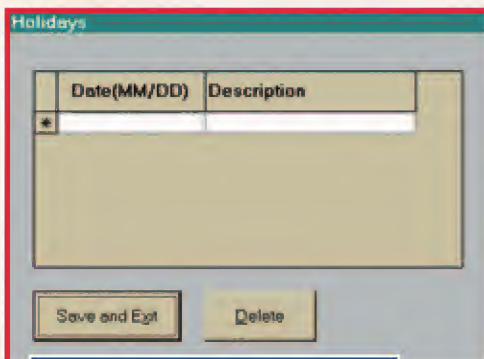
Your first step will be to read a key. Insert a black user key into the key reader/programmer and click the "Read" button at the top of the screen. The key serial number will be displayed on the top of the screen next to the "Read" button.

The next step is related to something we did a little earlier. Remember when we were back in the "User Defined Field Names" information screen? In that screen we were given an option to name several of the fields anything we wanted. Now we are able to enter data into those fields. This section is excellent for key control. Enter the person's name, building number, phone number etc. so you will never forget who has a key and how to contact them.

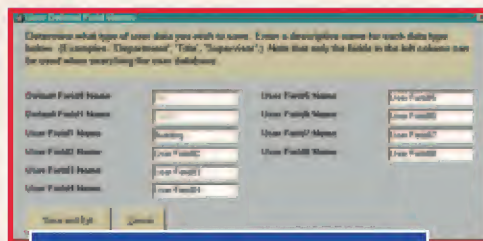
Next there is the door access privileges. This is where privileges are given to the user. Your choices

include the group, schedule, unlock privilege and holiday access privilege. This screen also includes a search function. This is handy if you need to change the privileges of a user or see if a person has already been issued a key.

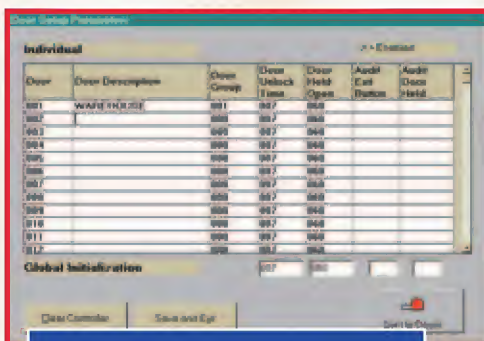
In the bottom right of the "User Data and Privileges" screen is a button that says "Program Doors". All of the user information is transferred to the door controller by using the blue key. (See photograph



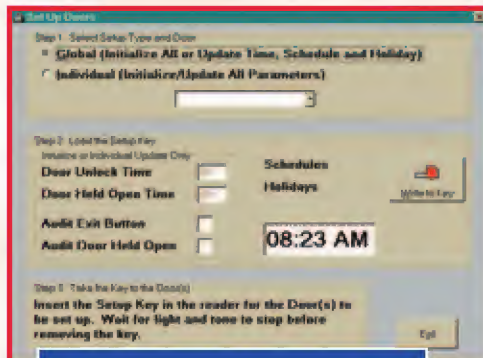
**10. Holiday information entered here.**



**11. Eight information fields can get custom names.**



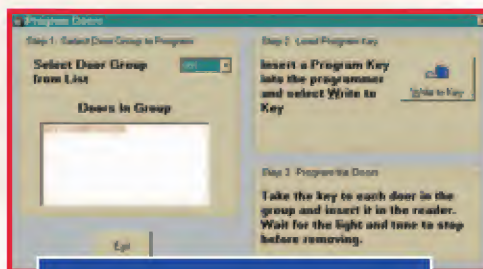
**12. Setting up door information.**



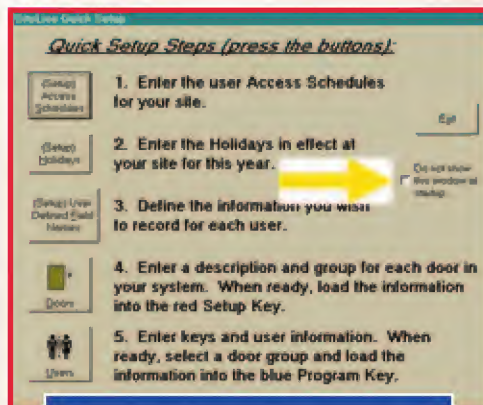
**13. Transferring door information to the setup key.**



**14. Assigning user information to a specific user key.**



**15. Transferring user information to the program key.**



**16. Turning off the auto start for the Quick Setup Steps screen.**



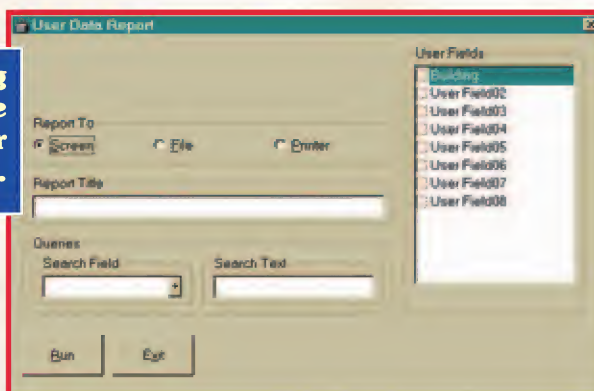
**17. The main screen for the SiteLine software.**



**18. Selecting the user report from the main reports menu.**



**19. Choosing information to be displayed on user report.**



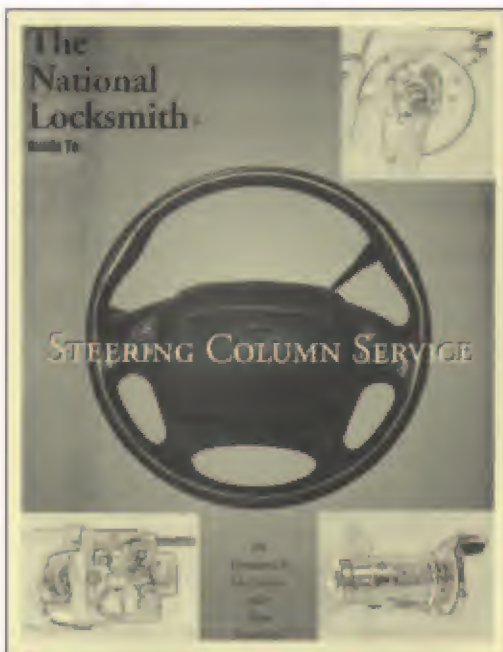
15.) If you are using more than one group, the following steps will need to be performed for each group.

1. Select the door group that you want to program. A list of the doors in the group you chose will be displayed.

2. Put the blue key in the programmer and click the "Write to Key" button. This will transfer information from the computer to the blue key.

3. The third step is to take the blue key to the door or doors that need programming and insert the key into the reader. The door controller will chirp until all of the data is transferred. When the chirping stops, the LED should turn green. Remove the key and the LED will turn red indicating things are normal. It is very important that the key is held firmly in place while the data is transferring to the controller. If the transfer is not successful the LED will blink red and the reader will beep twice.

The last thing to do is click "Exit" to return to the "User Data and Privileges" screen and then click "Save and Exit" to save your new information and return to the "Quick Setup Steps" screen.



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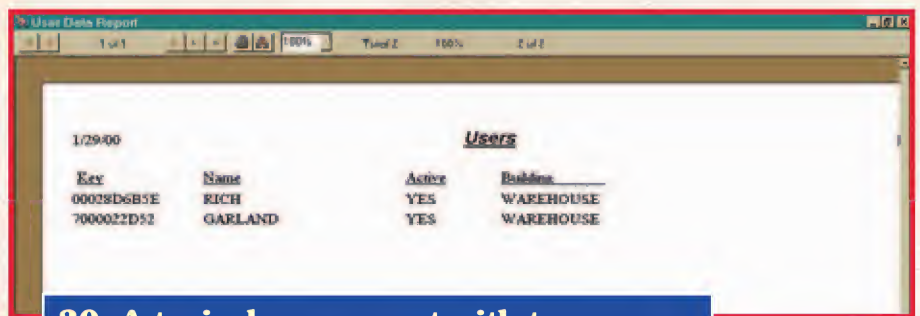




Every time you start the SiteLine software, the "Quick Setup Steps" screen will start automatically. This screen has a small box marked "Do not show this window at startup". (See photograph 16.) When you are finished with the initial setup, I found it nice to check this box so that when I start the SiteLine software, I go right to the main screen. All of the options that were in the "Quick Setup Steps" are available from the main screen as well as a few extras you may like. (See photograph 17.)

One of the choices that will be used often is the user report. Clicking the reports menu at the top of the screen will allow you to choose between five different reports. (See photograph 18.) The user report is the third in the list of available reports. Clicking on the "User Data" selection will open a "User Data Report" window.

There are several options to choose from in this window. You can send the report to a printer just like you would expect or to a file or just have it display right on the computer screen. (See photograph 19.) You can give the report a name, include several fields of information about the user or search



The screenshot shows a window titled "User Data Report" with a table of users. The table has columns for Key, Name, Active, and Building. There are two users listed: RICH and GARLAND, both active and working in the WAREHOUSE.

Key	Name	Active	Building
00028D6B5E	RICH	YES	WAREHOUSE
7000022D52	GARLAND	YES	WAREHOUSE

**20. A typical user report with two users.**

for specific information. Clicking "Run" at the bottom left of the "User Data Report" screen will turn your request into reality. (See photograph 20.)

Some of the other report options are user privileges, door report, holiday report and my favorite, the audit report. Just like the user report, the audit report allows you to add a report title and search for specific information. You also have the option of sending the report to the printer, the screen or a file for later use.

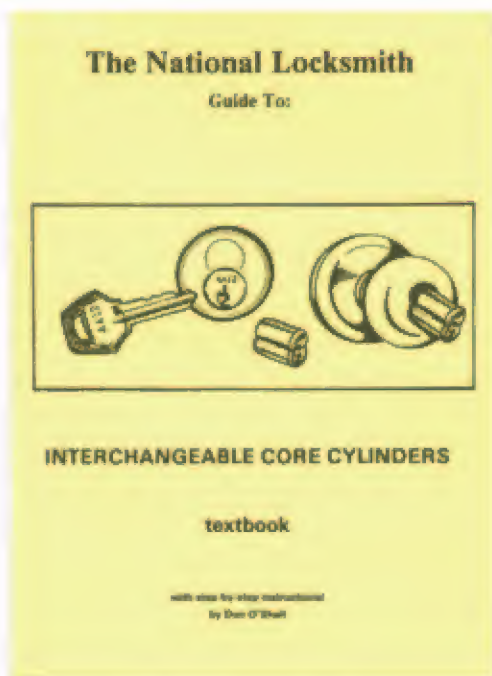
The SiteLine software is well written and very easy to use. I would expect that anyone who is able to use a windows based computer would require zero training. For

someone with very little computer experience, the required training would be minimal.

Next month we will go through an actual installation of the SiteLine door controller and include the Medeco Maglock® 1200 door magnet that has a holding force of 1200 pounds. See you next month!

*For more information about the SiteLine system, visit the Medeco web site at "www.medeco.com" or write to them at Medeco High Security Locks, 3625 Allegheny Drive, P.O. Box 3075, Salem Virginia, 24153-0330. For technical support on this product, call 1-800-675-7558 or circle 329 on Rapid Reply.*

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#ICB - 1





by  
Giles  
Kalvelage

# SecureRite.com

## From the Source

On February 29, 2000, I had the opportunity to speak with Marshall Merrifield, Chairman, CEO of Clark Security Products and SecureRite.com. Glenn Younger, Chief Operating Officer of SecureRite.com, was also present. SecureRite.com is a division of Clark Security Products, which is selling home security products over the Internet to consumers while enlisting the support of locksmith dealers.

Many of you may have already heard about SecureRite.com. It is an Internet web page site selling hardware to the public through locksmith dealers, but what you may not realize is that because it is a cooperative, the participating locksmith dealers maintain their independence. They can sell additional product and product lines, even non security related products, on their own web site, which is viewed by customers logging through a SecureRite.com web page. Let's find out more.



**Marshall Merrifield,**  
Chairman, CEO of  
Clark Security  
Products and  
SecureRite.com

where the consumer is. So the actual cash ends up in the SecureRite.com dealer merchant account. It does not end up in the SecureRite.com account. That's a critical difference from other Internet malls or joint selling efforts. We make sure that the merchant of record is the locksmith.

**Giles:** So when a customer wants to purchase products over the Internet, the funds ultimately end up to the closest dealer by zip code?

**Glenn:** It depends on how the customer gets to SecureRite.com. If they were to stumble onto the SecureRite.com site by themselves, or through some of our Internet advertising, then we allow them to do a dealer selection. SecureRite.com lists the closest dealers. The consumer is allowed then



to pick the dealer. We list the dealers closest to furthest.

If the customer comes to SecureRite.com through the dealer's site, which is part of getting set up as a SecureRite.com dealer, then that sale goes to that locksmith only. We help dealers get a site of their own and encourage them to put their "dot com" name on their business cards and all of their advertising.

**Giles:** What if I don't have a computer?

**Marshall:** To become part of the SecureRite.com network, one has to get their own dot com domain name and web page. If they don't have a computer, we offer a home page on our server that they can use until they have their own. And since it's their own dot com, they can have that home

**Giles:** What is SecureRite.com?

**Marshall:** SecureRite.com is the first Internet cooperative. It's two different dot coms sharing one Internet transaction in real time. For homeowners we offer an array of residential and home security products and other information on our main site. The consumer can fill a shopping cart and give a credit card number to the SecureRite.com page. We then transmit the credit card information by encryption to Visa. Visa verifies whether the funds are good or not, and then we instruct Visa to fund the money to the nearest SecureRite.com dealer by zip code to



page reside anywhere, on AOL or wherever they want. They're the owners.

**Giles:** *Is the dot com domain name approximately \$70 for two years?*

**Marshall:** That's right.

**Giles:** *Is that what you're helping the locksmith dealers set up?*

**Marshall:** Absolutely. They have to register and pay the \$70 because it's yours. We will walk them through the steps of what they have to do.

They also have to become an e-commerce merchant. This requires a merchant account number, just like a credit merchant number with a bank. However Visa requires that merchant number be different than their normal credit card number. Unfortunately with the Visa monopoly, they are allowed to require the world to have a second merchant account number if they want to do business over the Internet.

**Giles:** *This is important to point out.*

**Marshall:** Absolutely, but this is what *anyone* would have to do to get a dot com domain name and be able to catch cash over the Internet.

They will also have to have a relationship with a transfer agent. These are companies which actually move the digital transaction packets around the Internet in an encrypted way. We only want safe and encrypted transactions to be processed through SecureRite.com.

**Giles:** *Is that transfer agent a third entity that the locksmith must deal with or is that included with the on-line credit card?*

**Marshall:** It's a third party relationship that the locksmith has to have by himself, to be viable on the Internet. *Payment Net* is the name of one of the five or six bigger ones and that's the one we are using. We have worked out with *Payment Net* that they will offer to all of the dealers a good deal. We also have a couple of banks that provide merchant commerce that will offer a really good deal. Charges end up being approximately 2% out of the transaction, so out of a \$100 sale, that would go to their merchant site, 2% will go to Visa and I think it's another 3/4% - 1% will go to *Payment Net*. That's just the process of being available to do business over the Internet. While SecureRite.com

doesn't get a penny of it, an initial outlay of about \$200 will get the dealer all of the e-commerce software and programming which allows a locksmith to have a site, home page and the ability to sell and catch cash. We're providing that right now.

**Giles:** *Making the sale, getting the cash - now we've got to get the product to the end user. How does that happen?*

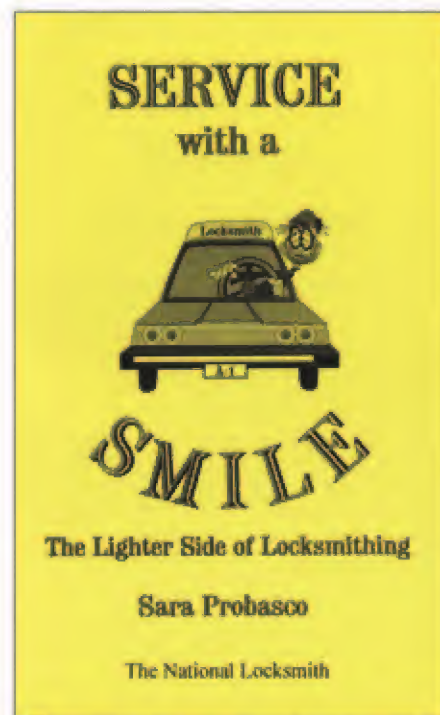
**Glenn:** That's where Clark consistently leads and excels. Getting the package out with the right product at the right place at the right time. We ship the order directly to the

customer, with the packing slip indicating the SecureRite.com dealer that made the sale. The packing slip lists the products that were bought and is co-branded between SecureRite.com and the locksmith.

**Giles:** *Does the Locksmith dealer get the whole dollar amount deposited into his account and then is billed by Clark?*

**Marshall:** Exactly, he gets the "Full Monty", as it is called. In our contract with dealers, we specify the sale price we offer on site and what the purchase price is that we're offering to the dealer.

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#SWS



We might sell it for \$40 to a consumer while the dealer will buy it for \$25. In a sense, the guy is left with fifteen dollars on that sale. The offer that we're making to dealers is that SecureRite.com is pricing products exactly to match the rest of the world out there. A Kwikset deadbolt is priced right at Home Depot. Window locks are priced right at the local hardware store. So here, for the first time, dealers are able to aggressively sell residential products and not have any price differential. Obviously, both SecureRite.com/Clark and the dealer are making less profit margin than we

would like to be making. The days of doubling the price that we paid to be selling are probably over. However, there's nothing that prevents us from playing, because we have this most efficient form of working together.

**Giles:** *If a customer knows what they want, but that product is not on the SecureRite.com list, does that mean they cannot order it?*

**Marshall:** No, they cannot order it on-line at that site. What a lot of people do is notice that prominently displayed on the site is a zip code search for the closest professional.

When they key in a dealers five digit zip code where a dealer lives their going to get the five, six, seven dealers closest to them and little advertisements about them. Odds are, one of those dealers could sell it to them. We want to drive traffic either to the dealer's store or their web site. In our contract with dealers, we require them to give us first call for all their locksmith supplies to be part of the SecureRite.com network. That's the only payment that they have to make to us. Give us first call. If we don't have it, we'll tell them. We don't pretend that we're the only place around, but we feel that we can honestly and fairly ask for a first shot for supply in exchange for 21st century business building tool.

**Giles:** *Is that courtesy line manned 24 hours or monitored on a routine basis?*

**Glenn:** When folks are on-line, they are able to send an e-mail very easily. Typically they will e-mail something and we'll respond to them the next day. If they e-mail us in the evening or at night, we'll respond to them on a pretty timely basis. Most of our communication though is via e-mail, not the telephone.

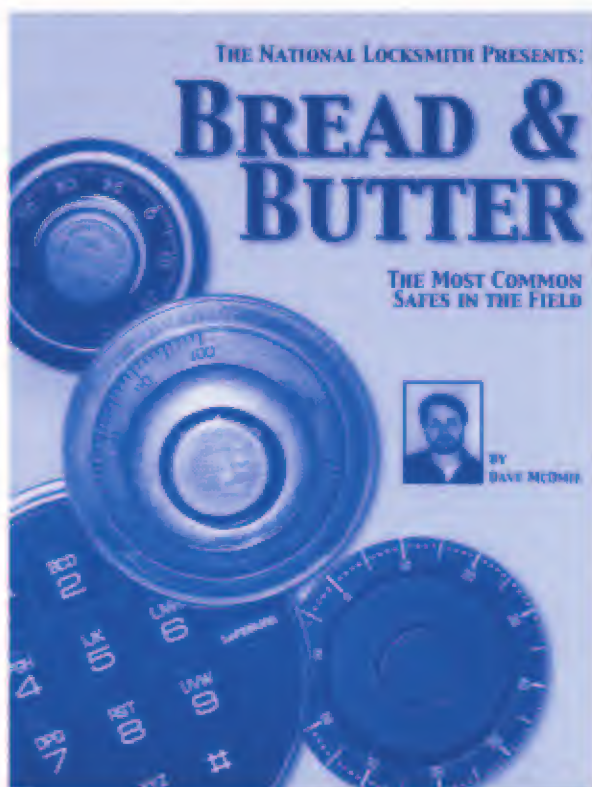
**Giles:** *The rates for SecureRite.com competing with the rates at the hardware store chains kind of mushrooms. Does that mean that SecureRite.com dealers are going to get preferential rates over the standard Clark dealers?*

**Marshall:** Excellent question. We do have on the Internet the sale pricing for those specific items that are greatly priced. There's maybe fifteen of them or so. That's really all Home Depot aggressively prices. We walked the aisles of Home Depot and found that only fifteen or so are really aggressively priced, another twenty or thirty that are moderately priced, the rest of the three hundred items they have are list price. We're blowing apart the concept of Home Depot as the only source for residential security.

**Giles:** *Can a customer purchase commercial grade products?*

**Marshall:** No, they can't buy those right now on the site. We are about to offer a huge array of commercial products through our new online catalog for sale, by the dealer, on his site. So if they go to Johnny's Lock or Rapahonek Lock, they will see some commercial products available. A

## Bread & Butter



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#BB - 01



customer can go around and fill a shopping cart there, place an order, and give Johnny's or Rapahonek a credit card. The credit card money will then be added to Johnny's or Rapahonek's account. Clark Security Products will be instructed to ship those commercial products either to Rapahonek directly, where Rapahonek will key it, add value to it, deliver and install it. Or if Johnny's or Rapahonek want, we would be happy to drop ship that to the customer. That would be Johnny's or Rapahonek's choice.

**Giles:** *Since this is all going dot com, there's really no requirement that a locksmith, who chooses to participate, be a storefront locksmith or a mobile locksmith only. Does that bother you?*

**Marshall:** No, not at all. In fact, that's one of the best things about it. We are just thrilled that anybody who is a professional locksmith and serious about the trade, whether they are mobile or have a shop, have a hundred and eighty employees, or just themselves, they can play. That is the beauty of the Internet. One of the great elements of technology is someone who is professional about their business and their craft can look and be as capable as the biggest guy.

We find that certain products beg for show and tell. If they have a store we will offer to assist them with merchandising materials so customers will recognize them as a SecureRite.com dealer. We have some signage for the shop and a little neon sign for the window - that kind of stuff. There is a lot of configurations, there's nothing really required there, it's just an available set of opportunities. A lot of people are taking us up on that now.

**Giles:** *What other benefits are there?*

**Marshall:** While starting the second full year of being in existence, we now have 700 dealers who have signed up. We are representing a national network of installers, mobile or shop, to large national accounts and large chains for installation services. They're going to be the first to hear about the deal that we have just struck with the True

Value stores.

**Giles:** *True Value, what's that about?*

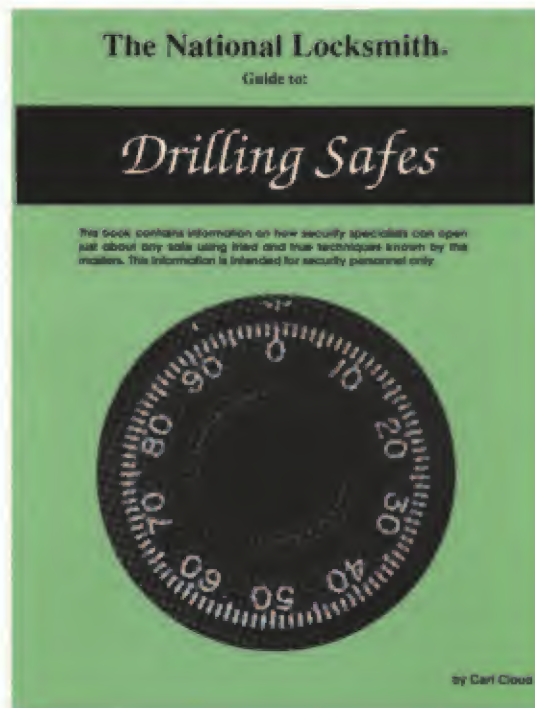
**Marshall:** There will be a press release soon to the general press about an affiliation with the 9000 True Value Stores nationwide and SecureRite.com dealers. SecureRite.com will be providing installation services for True Value Customers. So at the True Value Store, and at the TrueValue.com site,

they can request a SecureRite.com dealer to provide installation services.

**Giles:** *Will that be exclusive to True Value?*

**Marshall:** True Value will be promoting and developing this. This is a new service for them though. True Value has been buying certain types of locks directly from manufacturers for almost a century. They have now recognized that they cannot provide

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#DS - 1



the full security professional service and performance that a SecureRite.com dealer can provide. All of the leads will come into SecureRite.com dispatch. The transaction, once the referral is handed off from SecureRite.com dispatch to a SecureRite.com dealer, is revenue. SecureRite.com dispatch will send them out to the SecureRite.com dealer by the closest zip code.

**Giles:** Perhaps a given SecureRite.com dealer cannot, or does not provide a specific service True Value customers may need. What then?

**Marshall:** We are polling SecureRite.com dealers to find out what services they are willing to offer. Some may not want to do residential, and that's fine if they only want to do commercial. But True Value has both residential and commercial customers. So SecureRite.com dispatch will dispatch to the closest SecureRite.com dealer and off they go. Cash collection with that customer is in the hands of the SecureRite.com dealer. True Value Store does not want or does not require any piece of the action. It's not being billed through them, they just want to be able to hand off to a professional, and they're very, very pumped about this network that we've established.

**Giles:** If I understand this right, if a product is purchased through SecureRite.com, the dealer more or less needs to honor the hardware cost price that SecureRite.com quotes, correct?

**Marshall:** On the Internet site, yes - but in the shop he can charge whatever he wants.

**Giles:** For installation, however, is there a recommended price that SecureRite.com is supposed to charge?

**Marshall:** No, not at this point. We are convening an advisory counsel of SecureRite.com dealers in May to talk about how we should do this. We will to be asked about that I'm sure, by the True Value stores.

**Glenn:** I asked the True Value people specifically, "If the end user wants to have more products sold and installed, is it OK if a SecureRite.com guy does it?" A Senior Vice President of True Value responded, "Absolutely. This is the locksmith's expertise, not ours. We cannot be all things to all people. But we do want to be able to help solve our customer's needs so that a customer doesn't go someplace

else." It's a wonderful new alliance. What we're really doing is enabling the 9000 True Value Hardware stores to sell for our locksmiths. To help create business for them by giving us dispatchable jobs.

**Giles:** When does the True Value service network start?

**Marshall:** That service network installation referral program is literally kicking off this week.

**Giles:** Who can be a SecureRite.com dealer?

**Marshall:** We're signing up professionals, we're not signing up folks that may not be the best credit to the trade. We are looking for credentials, people who are serious about learning. If we don't know the customer personally for having worked with them for years, we will contact associations, do reference checks, make sure they have the appropriate licenses and things like that. Those are very important. The SecureRite.com network has got to refer an absolutely professional security installer. Again, mobile or shop makes no difference.

**Giles:** So, does a license count as a reference?

**Marshall:** Absolutely. If a guy's got a license number, we want it. In fact, one of the projects we're working on quietly has been getting all of the different states' licensing requirements. A lot of our customers are helping us with this because they have an interest in making sure that all of the SecureRite.com dealers in their state are of the same level. We've also been supplying locksmiths for 45 years, so it's not like we don't know where to go or where to ask. We've had a few that we've turned down.

**Giles:** Is belonging to a trade association necessary?

**Marshall:** We want



accredited locksmiths. The way we check it is look at the licensing issue, and/or check references. The first place we go is to the associations. If they're in good standing with an association, that means a lot. Again, our first reference is ourselves - hey, we know this guy. We have 65 traveling sales guys, 12 soon to be 13 distribution centers, so we're in all parts of the country. We know the manufacturer's reps, we know the associations. Each branch location operates in each region with a lot of local authority and discretion. These issues are important to us because we're part of the trade.

**Glenn:** It's not our goal to make sure that everybody belongs to a specific association.

**Marshall:** Right, that's true, we're not trying to drive the association membership per se, but we believe





the associations play an important role, and we really respect their references about people.

**Giles:** What about a potential dealer's geographic location?

**Glenn:** It doesn't really matter how big or small the town is. They will have a much larger presence.

**Giles:** How many dealers are there going to be?

the top 10 or 20 percent of the dealers. We're looking for the best in the world, not the worst.

**Giles:** How does a locksmith who is interested, become involved with SecureRite.com?

**Marshall:** They call SecureRite.com at 1-800-241-3930, and speak with our customer service team of: Bev, Mike, or Sholanda. They can also contact their regional Clark outside sales

person and express interest. They receive a description of some of the benefits: the ability to set up a dot com and become an e-merchant. That's all that is needed to become part of the service network and get installation leads. In exchange for all of those benefits, we ask for a cooperative marketing agreement which we ask folks to sign, which explains that Clark needs first call on their supply needs. We also ask for an exclusive arrangement with SecureRite.com in terms of being part of other cooperative marketing programs. In other words a True Value guy in town, isn't also an Ace Hardware dealer. I don't think you would ever see a True Value store have an Ace sign hanging on it. Just like a Ford dealer isn't a Chevy dealer also. That's sort of normal and I'm sure we're

going to breed competition.

Clark and SecureRite.com have created a great opportunity for these locksmiths to grow their business in a 21st century, which they would not have been able to do any other way. The average locksmith does not have time, talent or treasure to build an e-commerce site. We figured out a way to benefit all of the professionals that are willing to work with us in this way. Really, the only true cost is the restriction from being part of another cooperative.

For more information on Clark Security Products and SecureRite.com, circle 328 on Rapid Reply.

TNL

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### Door Locks

Doors are meant to allow passage from one area to another so it's no surprise that most burglars enter by some type of doorway. Door security starts with the door itself so read our section on [Door Frames](#) if you haven't already. Next is the door lock itself. All exterior doors should be fitted with a deadbolt; a regular door lock with a spring latch offers minimal security against a burglar.

For doors, SecureRite offers 3 different kinds of deadbolts each designed to protect against an intruder. We also offer a [Door Bar](#) for extra protection and a [Door Viewer](#) to allow you to see who is at your door. Click here to see our exclusive [SecureRite.com Keyway](#).

**Deadbolts**  
Grade 2 & 3 residential deadbolts in 2 different finishes. Both come with a standard 1" throw. Great for adding security to an existing door.

**Door Lock Set**  
Grade 3 residential Door Lock and Deadbolt set all keyed to the same key. Great for back, side, and garage man-doors.

**Door Lock Set**  
Grade 2 residential Deadbolt and Handle set with a designer shape for use with front doors.

**Door Viewer**  
160 Degree Door Viewer lets you see who is at the door before you open it

**Door Bar**  
Portable, lightweight, easy to use Door Bar for when you want extra security.

**Reinforced Strike**  
Heavy Duty-High Security Box Strike. Strike has screw (2" length), 16 Gauge Metal

**Metal Deadbolt Wrap-Around**  
Strengthens lock kick in resistance, 4 1/2" by 4 1/2", 1 3/4" thick door

**Marshall:** It really doesn't matter, because they are marketing over the Internet. Geography doesn't have anything to do with it. What does matter is technical competence and professionalism. The door shop, the contract hardware guy and The Home Depot, cannot be SecureRite.com dealer's, only professional locksmiths can. This is a way that we can go out and get business that they haven't been getting, whether it is residential on a SecureRite.com site or commercial on their site. It doesn't matter how many security professionals will be in town because we want people to drive business to their own dot com. We are looking for

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#IC - 2001



# TECHNITTIPS

## YEAR-END PRIZES



### **Grand Prize**

Silca Bravo Duplicator



### **1st Prize**

HPC's 1200PCH  
Punch Machine



### **2nd Prize**

Mas Hamilton's  
PowerLever 2000



### **3rd Prize**

Curtis 2200 Duplicator



### **4th Prize**

SDC Magnetic Lock,  
Keypad and Exit Switch



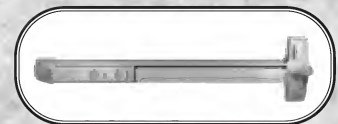
### **5th Prize**

Securitron 12-Volt Unlatch Plug in  
Trans & Touchpad Retail Value \$650



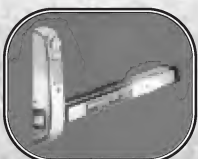
### **6th Prize**

LaGard "SmartGard"



### **7th Prize**

Detex Advantex



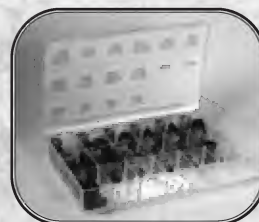
### **8th Prize**

Arrow 400 Series Alarmed  
Exit Device & S-75 Mounting  
Plate Kit for Narrow Stile  
Aluminum Doors



### **9th Prize**

\$500 in BWD Products



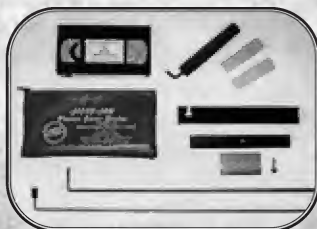
### **10th Prize**

\$500 in ASP Auto Locks



### **11th Prize**

\$500 in Strattec Auto Products



### **12th Prize**

Tech-Train "Jiffy Jack"



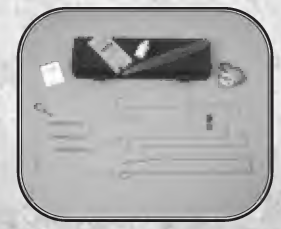
### **13th Prize**

Sargent & Greenleaf 6120  
Electronic Safe Lock



### **14th Prize**

High Tech Tools  
2000 Pro Set



### **15th Prize**

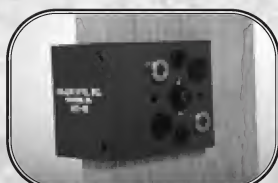
Slide Lock's Master "Z" Tool Set





**16th Prize**

ESP Products Sampler



**17th Prize**

Major Manufacturing's  
HIT-111 Drill Guide



**18th Prize**

Abus Padlock's Marine  
Padlock Display (\$120 Retail)



**19th Prize**

Mark Bates Associates  
Falle Pick Set



**20th Prize**

Baxter JV-1 & JV-5  
Code Books



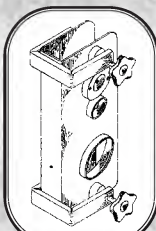
**21st Prize**

Sieveking Products  
Squeeze Play



**22nd Prize**

Rodann's TX 500  
RX 5990 Wireless Door  
Annunciator System



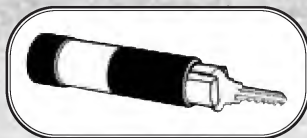
**23rd Prize**

A-1 Security Manufacturing  
Installation Jig



**24th Prize**

Keedex Sampler



**25th Prize**

Framon  
Impressioning  
Handle



**26th Prize**

Gator Tool Multi-Purpose  
Facecap Tool

## These Prizes Awarded Each Month!

- BWD Automotive Ford or GM KwikIt
- Wedgeco™ Key Extractor Kit
- Strattec Racing Jacket
- HPC Air Wedge™
- Sargent And Greenleaf 4400 Series Safe Deposit Box Lock
- A-1 Security Products
- ILCO Key Blanks (100 Blanks)
- Keedex "SPIN OUT" Screwdriver
- Tech Train Training Video
- Sieveking Products Gm E-Z Wheel Puller
- Major Manufacturing Products
- Slide Lock's "Z" Tool Opening Set
- The Sieveking Auto Key Guide
- Jet Key Blanks (100 Blanks)
- High Tech Tools
- LaGard Combo Guard

### Send in your tips, and win!

#### How To Enter

Send a tip on how to do any aspect of locksmithing. Certainly, you have a favorite way of doing something that you would like to share with other locksmiths. Write your tip down and send it to:

Jake Jakubowski, Technitips Editor,  
The National Locksmith  
1533 Burgundy Parkway  
Streamwood, IL 60107-1861

Or send your tips via  
E-mail to: Natllock@aol.com

#### Rules & Regulations

Each tip submitted must include your full name, street address (no P.O. Box numbers), city, state, zip code, phone number, fax number or e-mail address.

#### Every Tip Published Wins

If your tip is published you will win one of the monthly prizes listed. At the end of the year, we choose winners from all the monthly tips published, that will be awarded one of the fabulous year end prizes. All you have to do to win is enter.

Prizes are arranged according to suggested retail price value.

Tips Start  
on Next Page



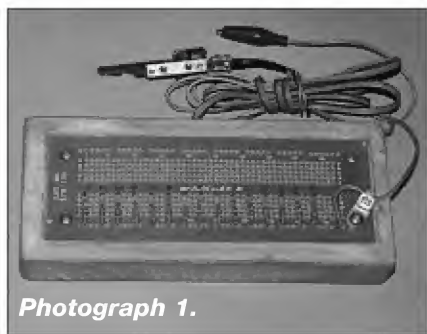


**BWD KWIKIT WINNER:  
Economy VATS  
Interrogator:**

Since I only do a couple of VATS jobs a year, I could not justify buying a VATS interrogator. Looking for alternatives, here's how I built one for less than twenty dollars and a few hours time.

I ordered a set of VATS resistors from J.C. Whitney (Part #73LY4764R @ \$9.95). Then I purchased a circuit board from Radio Shack (Part # 276-170 @ \$4.39).

I soldered the resistors into the circuit board so one end of each resistor is connected (or common) to one end of all the other resistors. On the other end I soldered a 1/4" long piece of copper wire, which sticks up on the circuit board. (See photograph 1).



**Photograph 1.**

I then soldered a 4-foot length of 18-gauge wire to the common side of the resistors and crimped a 1/4 female (slide on) connector to the other end of the wire. Using a second 4 foot length of 18-gauge wire, I soldered a second female connector to one end and a small alligator clip to the other.

The female connector is attached to a BWD plastic VATS test key. The alligator clip attaches to the copper wire posts on the circuit board, which I numbered with their respective resistance values.

Cut a mechanically correct key on the BWD test key, attach the two female (slide on clips) connectors to the 'ears' of the BWD test key and use this economical tester as you would any other. Of course, there is no built-in timer, but you can use your watch to time the countdown between tries.

The circuit board can be mounted on a piece of wood or in a plastic or metal box for accessibility and stability.

*Terry Heinrichs  
Canada*

## Jake's Jabber...

I hate to sound like a nag, but... I'm still getting a lot of tips from locksmiths who forget to include their physical address, their full name and in some cases, both. When that happens, I can't publish the tip.

So if you are snail mailing, Fedex-ing, e-mailing or sending me a tip by Pony Express, we have to have your name and physical address.

So, send me your tip, trick or idea ... just make sure you let me know who you are and where we can send the prizes if I publish your tip.

There are two things that make this column as successful as it is. One, of course, is the locksmiths that take the time to sit down and put an idea that has saved them time or made them money, on paper and send it in to me. Without that constant stream of tips, I couldn't continually put out this column every month, year-after-year. So, I want to thank each one of you that has sent me a tip - even if it did not get publisher (more on that later).

The second thing that makes this column 'click' is the manufacturers and suppliers that so generously contribute thousands of dollars worth of books, tools, key machines, key blanks, locks, electronics and automotive products. Year-after-year, these contributors provide us with the prizes that we give away each month and at the end of the year. I can't thank them enough for their generosity and support.

On behalf of *The National Locksmith*, myself, and each Technitip contributor who has ever had a tip published and received a prize, we want to say thank-you. This column would not be as popular as it is without your generous contributions.

See y'all next month!



**by Jake  
Jakubowski**



**WEDGEKO KEY  
EXTRACTOR WINNER:  
Practically Free Hands-  
On Car Locks Training**

I'm sure this is a pretty basic idea, but may be of value to new locksmiths.

You can receive nearly free lock and lock servicing training for cars and other vehicles by visiting your local junkyard!

Simply go to the nearest junkyard that allows you to pull your own parts. You may have to pay a gate fee of \$2 or \$3 to enter plus any parts you salvage, but you can pull all the door panels, and tear down all the steering columns you like.

Removing door panels will help you locate the linkages on the various models for opening techniques. Pulling steering wheels will give you training for in-column ignition removal and even some airbag training.

For very little money you can sharpen your ignition removal skills for both domestic and foreign autos and trucks. You can determine ways to remove door and trunk locks and at the same time, acquire a lot of spare ignitions and other automotive locks

that you can practice impressioning or generating keys by code on.

If you have never worked on a high-security automotive lock, the junkyard is a good place to practice. It's also a good place to take the new employee you hired to teach them the tricks of the trade without worrying about making a costly mistake on a customer's vehicle.

Best of all it's so cheap, it's virtually free!

*Jonathan Muhammad  
California*



**STRATTEC WINNER:  
2000 AUDI A6  
OPENING:**

I responded to the call to open a new Audi, only to find out that Audi changed their design on the interior lock button this year. I used to open these cars with a plastic strip slid through the rear of the front passenger window. I then wrapped around the exposed vertical lock button lifting it, to unlock the car.

Now the newly designed lock button is flush with the top of the door panel and there is nothing to grab. Not being one to give up easily, I



studied the situation and discovered that an "under the window tool" would probably work. It did and I had the car open in under a minute with the tool. However, the tool will not work on the electric lock button. Apparently, when the alarm is on, the power to unlock the doors is shunted at the switch inside the door, which is operated by the key.

The under-the-window tool works by pulling up the inside handle. All that is necessary is to pull the handle twice. Once to lift the door button and the second time to actually open the door.

*J. Drew Van Deventer  
Colorado*



**HPC WINNER:**  
**Clean Cam Lock Slots**

I install a lot of drawer and cam locks where it is necessary to make a slot in the area above the lock for either the lock bolt to fit into or the cam to fit into.

Where I have the room, I usually just used my cordless drill to drill a series of holes in a straight line to accept the cam or bolt. Unfortunately, it was often impossible to get a neat looking slot in the wood due to drawer

guides or rails being in the way.

I came across a slotting router bit that is capable of cutting a 3/8" slot which fits my drill nicely and allows me cut straight, clean slots with my drill held horizontally rather than vertically.

*Larry Wright  
South Carolina*

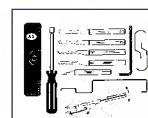


**SARGENT & GREENLEAF WINNER:**  
**Fuse Puller Makes Excellent Holding Jig**

I have found that an electrician's fuse puller (Ideal Industries, Inc. Part #34-003) which is available from most electrical supply houses makes a useful tool for holding knob sets, mortise cylinders, rim cylinders and many round objects.

I purchased one that has a different sized "grip" on each end to hold different sized shapes. Simply open it, clamp the cylinder or knobset you are working on and clamp it in your vise. The fuse puller securely holds the piece you are working on, giving you hands-free versatility.

*Rod Springfield  
Texas*



**A-1 SECURITY PRODUCTS WINNER:**  
**SLIDING GLASS DOOR TIP**

When installing Charley bars, locking pins or most any hardware on sliding glass doors, grind, or cut, the butt of your drill bits down to about a two inch length. Chuck the cut down drill bit so that no more than 1/2" protrudes from the end of the chuck.

This modified bit will make it virtually impossible to drill deep enough to break any glass or chew up any seals. As always, on a sliding glass door, proceed with caution.

When installing Charley bars, use a small level to make sure the bar is not installed at an angle.

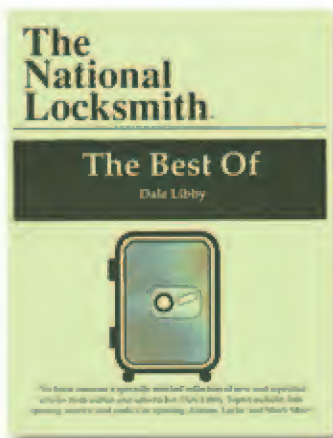
*Pete Gamble  
North Carolina*



**ILCO KEY BLANKS WINNER:**  
**Business Card Dispenser**

I came up with the idea of making some business card dispensers that I have printed on heavy card stock. (See illustration A.) These dispensers are economical and can be hung on bulletin boards with a thumbtack or a

## The Best of Dale Libby



This book includes the best articles written by Dale Libby over the course of many years, going back well over ten years! Now you can have this terrific collection of safe opening articles, automotive articles, and more.

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#DALE

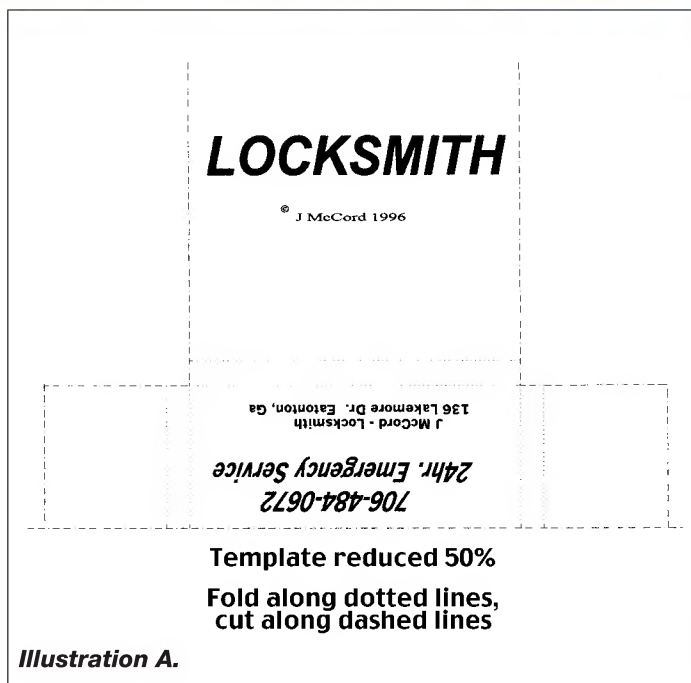
## Ford 8 Cut Decoding Key Set



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#FD - 8





**TECH TRAIN  
TRAINING VIDEO  
WINNER:**

**Toyota  
Opening Trick**

I always disliked trying to open Toyotas because I had a difficult time lifting the locking rod from the bottom of the door as is suggested by most tool manufacturers. I tried, unsuccessfully, to use a piece of packing strap to lift the

Every time I go on a lockout call, I give the customer a 'Security Tips For Your Home' brochure with two business cards attached. One card is for them and the other card is for a friend or neighbor.

The brochure lets them know that I am not just a Pop-A-Lock type person, but that I am a security professional who can take care of all their locksmithing needs. The brochure is something they can keep that is more important and useful to them than just another give-a-way key ring, which would probably just find its way into a junk drawer.

Besides, I think that customers tend to have a way of calling on someone who has already helped show them how they can make their home more secure and safer.

*Joan B. Yarrington  
Texas*

**Editor's Note:** Joan, thanks for the tip. I'm sorry I could not reproduce your brochure in full here but space wouldn't allow for it. Two things: First, anything that you can do to make every customer aware of the services you can perform will pay dividends down the road. Secondly, you are taking advantage of a good opportunity when you pass out literature detailing other services you offer that the customer you are dealing with may not be aware of. It is always beneficial to 'leave' each customer something besides a bill. Even if that something is a brochure on how to plant roses ... just make sure it carries your name and telephone number.

piece of magnetic material can be attached to the back of them so they can be attached to a cash register or other metal surface.

I place these dispensers on public bulletin boards around town and place the magnetic ones in stores, restaurants or other businesses that will allow me to do so. Each dispenser holds about twenty-five cards.

I return to each dispenser location on a regular basis to replace the cards that have been taken and to replace the dispenser if they begin to look tattered. By returning to each location regularly, it gives me a chance to meet and talk with any new employees.

It is really surprising how much business a small folded piece of paper can generate.

*Joseph McCord  
Georgia*



**KEEDEX WINNER:  
Plug Followers in Every  
Toolbox**

It seemed that whenever I reached for a plug follower, it was always someplace else.

So, I went to the local hardware store and bought one-and-a-half feet of 1/2" (OD) soft copper tubing.

After straightening it out, I cut it into 3" lengths with a tubing cutter and 'dressed' any sharp edges. I also cut custom notches in the ends of the followers with a hacksaw.

Now I've got a usable, easy-to-spot plug follower in each of my toolboxes and pinning kits.

*Thomas B. Sudduth  
Washington*

button, but the strap would slip off the button. I even glued a rubber band to the strap in an effort to get the strap to grip the button and lift it — no luck.

Finally, I hit on the idea of cutting a piece of fine emery cloth the width of the strap and about 3" long and Super Gluing the emery cloth to the strap where the strap folds in the middle. The emery cloth has enough "bite" to grip the button and lift it without sliding off.

Since I modified my strap, it has not failed me once.

*Don Songer  
Wyoming*

**Editor's Note:** Don thanks for sending in your idea. Just one word of caution: You need to use very fine emery cloth and be very careful that the emery cloth does not scratch the finish on the button. I found that if you did not get a good grip and maintain a steady lifting pressure, the strap could still slip and scratch the button. Possibly causing a disgruntled customer.



**SIEVEKING  
PRODUCTS GM E-Z  
WHEEL PULLER  
WINNER:  
Getting Your Name  
Out**

I've only owned my own locksmith shop for a short time, so I'm always looking for new ways to increase my business. I think that I've hit on a really great idea (at least it's working for me) that I'd like to share with other locksmiths.

**Major** MANUFACTURING, INC. **MAJOR  
MANUFACTURING  
PRODUCTS  
WINNER:**

**Another Trunk Opening Trick**

In the January, 2000 Technitips column, Dan T. Nave of Pennsylvania gave me the idea to send in this trick that I use a good bit when it comes to keys being locked in the trunk of cars.

Dan is correct in saying to drill out the rivet under the trunk lid holding the lock clip in. However, in a lot of cases, such as on Cavaliers, etc., there isn't enough room to drill.

To overcome this problem, I went out to Sears and bought a cotter pin extractor tool (part #4319m). This tool is in the shape of the letter L, and it has a sharp point on the end. The other end has a handle to grip it with. When there isn't enough room to drill out the rivet, I place the point of the cotter pin extractor between the lock



clip and body, as if I was pulling the clip out. If the extractor will not completely 'seat' under the clip, I use a hammer and hit the back of the long 'L' of the extractor to force it in.

Then I twist and work the tool back and forth until the rivet pops off. I can then remove the clip, pull the lock and open the truck with a screwdriver and retrieve the keys.

This is a very sturdy tool, but if you should break it, take it back to Sears and get a replacement for free.

*Marc Grizzard  
South Carolina*

Editor's Note: Marc, thanks for the tip. It does work. My concern is that you could easily damage the paint around the area you are working on if the tool should suddenly slip. So I'd urge any reader that tries Marc's — or Dan's — idea to do so with caution. Like always, when you're in the field and looking for solutions, you sometimes have to resort to the unconventional to get the job done.



**SLIDELOCK'S "Z" TOOL  
OPENING SET WINNER:  
Guide For Hand filing  
Keys**

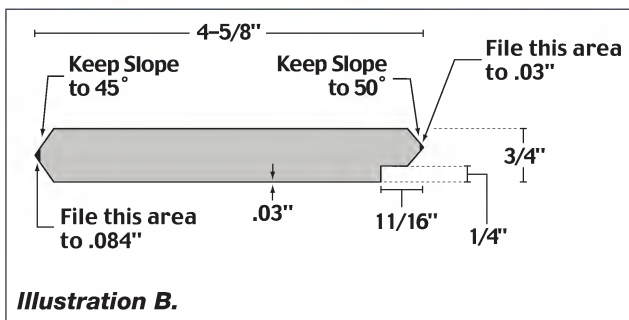
Illustration B, shows how I made a guide for hand-filing keys for Kwikset and Schlage locks. The tool helps maintain the proper angle on the ramps (slope) of the cuts and the 'flat' that the pin rests on.

Utilizing this tool helps with impressing or other hand-filing chores. I call it my "Close-Nuff" gauge and I made it out of 3/4" metal banding material that can be found almost anywhere — especially around lumberyards.

To use the tool I simply place the proper end in the key that I am filing and adjust my filing according to the 'reading' I get on the gauge. It is also possible to mark the depths of the cut on the face of the gauge so you can determine the proper depth as well as the angle of the ramp and the width of the flat.

As a quick side note tip: I place a white hand towel on my workbench so that when I drop something, it will catch in the nap of the material and the white background makes it easy to spot the dropped item. I find the towel is really handy to have around when Mr. Murphy comes visiting and parts and pieces go flying.

*James McKurey  
Texas*



**Illustration B.**



**THE SIEVEKING AUTO  
KEY GUIDE WINNER:  
Quick Baldwin  
Images Opening**

I stumbled on this tip quite by accident

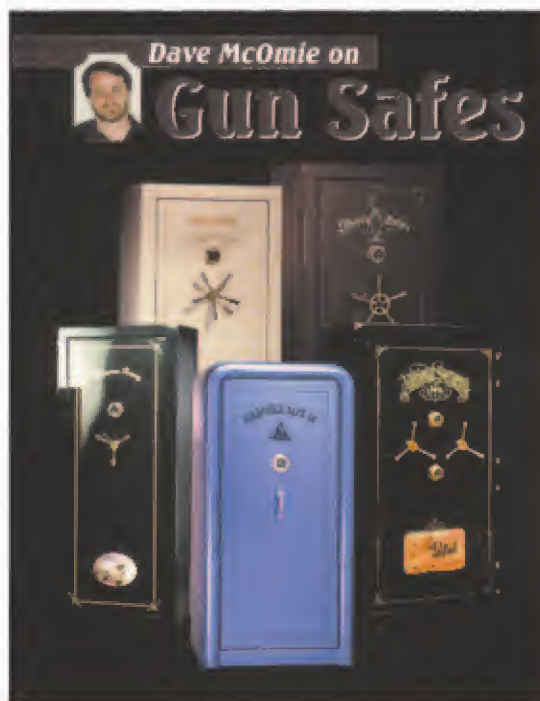
while practicing my picking skills on a Baldwin Images lockset.

I inserted a pick all the way through the keyway until I felt a slight spring action. At that point I pushed the pick in, turned the knob and the latch released.

*William Stone  
Wyoming*

Editor's Note: William, I didn't have a chance to try this little trick, but it sounds interesting. I'd appreciate any feed back

# Gun Safes



Need a drill point or relocker drill point  
on a gun safe?

**CLICK HERE TO LEARN MORE**



#GS - 1



from readers regarding this. If it works as you say, it will certainly lighten the load of any locksmith that has to pick Baldwin Images. Thanks.



**JET KEY BLANKS  
 WINNER:  
 Key Hook Fix**

I found a very inexpensive way to stop keys from bouncing off the key hooks in my van.

I bought a couple of feet of windshield washer hose and cut it into 1/2" lengths. I placed these pieces over the end of my key hooks and it keeps the keys in place. When I need a key, the piece of hose is easy to remove and replace.

*Ladell Wood  
 South Carolina*

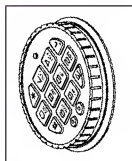


**HIGH TECH  
 TOOLS WINNER:  
 Baby Shampoo = Slick Opening  
 Trick**

Whenever I am called to open a vehicle and the weather-stripping is too tight to easily insert my wedges or opening tools, I find that a very light coat of Johnson's Baby Shampoo on my opening tool facilitates their entry into the door cavity.

I keep a small bottle in my truck at all times. The nice thing about the baby shampoo is that it will not hurt the weather-stripping or damage the cars painted finish and it will wash off during the next rain or carwash.

*Ron White  
 California*



**LAGARD WINNER:  
 Hinge Shim Trick**

I've seen everything from cardboard to masking tape used to shim hinges. I have found what I believe to be the perfect hinge shim material. A piece of 1/16" safety wire.

To use this versatile shim material, remove the screws in the leaf of the hinge to be shimmed and cut a piece of wire. Bend the wire into a "U" shape as shown in illustration C, and attach the shim to the hinge or jamb with a piece of tape. Reinstall the hinge and try the door. If the door requires further shimming, remove the screws and cross the legs of the "U" shaped wire as shown in the illustration. This gives you an 1/8" shim.



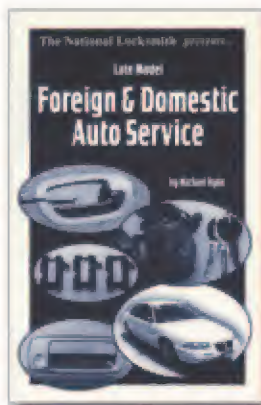
**Illustration C.**

Keeping a small roll of wire on my truck ensures that I always have shim material available for fast, easy hinge shimming.

*Al Bullard  
 Arizona*

**TRL**

## Foreign & Domestic Auto Service

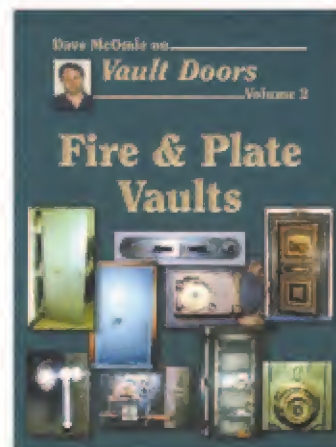
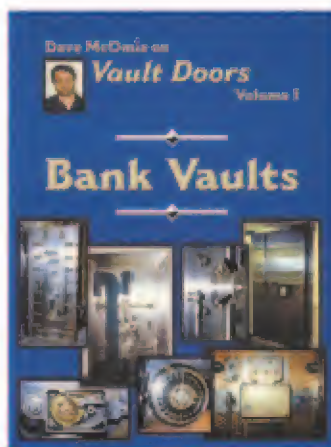


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#FDAS - 1

## Dave McOmie on Vault Doors Vol. 1 & 2



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#VD - 1, VD - 2





# To Boot or Reboot



by  
Dale W. Libby, CMS

**I** can remember when Yale OB locks were high tech. Not really, I am not that old! [Rhetorical].

But it is an interesting time to be a safecracker. Going from mechanical combination locks to electronic locks in my lifetime has created many new opportunities to learn new things. Most of them good.

The first benefit from electronic locks is the ease of operation. The ease of entering a combination is very suited to the digital and electronic age we now dwell in. Just punch in a bunch of numbers like dialing the phone. It's much easier than teaching someone to operate a dial combination lock, which can sometimes be trying to say the least.

The second benefit is the ease (usually) of retrofitting an electronic swing bolt or regular bolt lock. With the cost of electronic locks, changing them for mechanical dial combination locks can be a great source of income for you, the safecracker. Very little goes awry on these locks, but when it does, your choices are clear. If the unit cannot be tricked (or rebooted) open by simply changing batteries, then the safe must be drilled somewhere to allow the electronic lock to be compromised.

The point of this article is to acquaint everyone, beginner to expert, on a simple way to get some electronic locks to work after they have "Frozen

Up" somewhere in the twilight zone. Those who work with electronic locks all the time know this procedure, but I learned it from "Little Tommy" (Part of the Diabolical Duo).

His company does a lot of mechanical safe lock retrofitting with electronic locks, both auditing and non-auditing types. I personally do not get to work with many different types of electronic locks. I will still pull out a book of directions for changing combinations when working on an unfamiliar lock.

The safe in question had a LaGard SmartGard electronic safe lock. This safe container (a B rate) used the electronic lock to control the opening of this unit. The unit was labeled "Knight" but it did not have the Knight Hard plate that we are used to. Tom originally sold and installed the safe to the floor. These units are always installed in some obscure location, like under the manager's desk, and in the corner.

A month later, almost to the day, the customer called and said the safe would not open. It had some strange message and gibberish on the screen and the door was still locked shut. Tom called the safe representative and a new lock was sent out to retrofit the existing lock. Tom's instructions were simple. Open, replace existing lock with new lock, return the old lock for evaluation, and send us the bill.

Tall orders from the factory representative. Sometimes it is impossible to open the safe without inadvertently damaging the electronic combination lock. Most times, there is a weakness in the safe that can be exploited that leaves the electronic lock in tact, or at least the electronic components.

One of the problems with doing warrantee work, at least from my point of view, is that the manufacturer wants the lock back in perfect shape, so he or the factory can determine the problem and hopefully correct it in the future. Most electronic lock failures are mostly due to having low or dead batteries, and not to their manufacture.

Tom replaced the lock and keypad. The only thing he did not replace was the 9-volt battery carrier inside the safe. He did several checks of the lock and movement of the bolt. Always working perfectly.

He opened the safe by removing the outside battery cover, removing the 2 alkaline 9-volt batteries, and removing the two-keypad retaining screws. Once the keypad was removed, he turned it over and removed the back cover of the keypad by removing four small Phillips screws. With the inner cover free, he unplugged both the lock control and the inner power (9-volt source, six "C" size batteries connected in series).

He waited a minute, and then plugged everything back in. With the keypad not attached to the door, he tried the combination and it worked. He had R&R'd the lock. This means he had either:

- \* Removed and Repaired
- \* Removed and Replaced
- \* Removed and Rebooted

By interrupting the power to the lock and keypad, he had started at ground zero again. This is exactly the case when your computer will sometimes lock up at the worst time, and you lose information because you had to reboot your computer. There are two types of booting procedures, the Hot and Cold boot. With the Hot boot, the computer shuts itself down without turning off all the power to the computer. With a cold reboot, all power is turned off to the computer.



1. LaGard SmartGard electronic lock.



2. Raised platform for keypad mounting.

When the power is restored, the computer will start from the beginning of the Powering Up and Booting process. Everything should all be better. I really love those "Windows Error Message" that explain everything by giving a Hexi-Decimal address of the error, and its number. Even if I understood the error message, I still would not be able to fix the error. Easier to reboot and hope the digital electronic gods are smiling.

Now, I enter the picture. Another month has gone by and the customer calls again with another problem. The safe display shows the word "OPEN" and the safe will not open. Tom informed the customer that we would be there today, and called me and

asked for my input and vast knowledge (ha ha) on electronic locks. The location was a town halfway between our shops, so we met there.

The safe in question is seen in *Photograph 1*. It is the unit that Tom worked on before. Although you cannot see it, the word OPEN is showing in the middle of the diode display. Again, there were orders from the manufacturer to save the lock. However, the representative said he would await Tom's findings before authorizing payment. This was very fair, for they had already paid for the first service procedure and trip charges. Weather the manufacturer or the customer would pay the second and subsequent service calls would be determined that day.

## Locksmith Dispatcher 2000



Controlled Service  
dispatching software  
specifically for the  
locksmith!

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#DIS - 2000



The safe display did say "OPEN", but it was not. Tom showed the rebooting procedure, and soon the safe was open again and working. Since we had to do something to try and find the problem, we removed and replaced the large plastic 8-wire connector from the lock to the keypad. After doing this and replacing all the batteries, the lock worked fine, and we could not make it fail. It has worked for over five months as of this writing.

Here are a few more photos of this lock and door unit. *Photograph 2*, shows the angled platform that the electronic keypad is mounted to. This makes it very easy for the operator to see the keypad under the office desk with limited lighting.

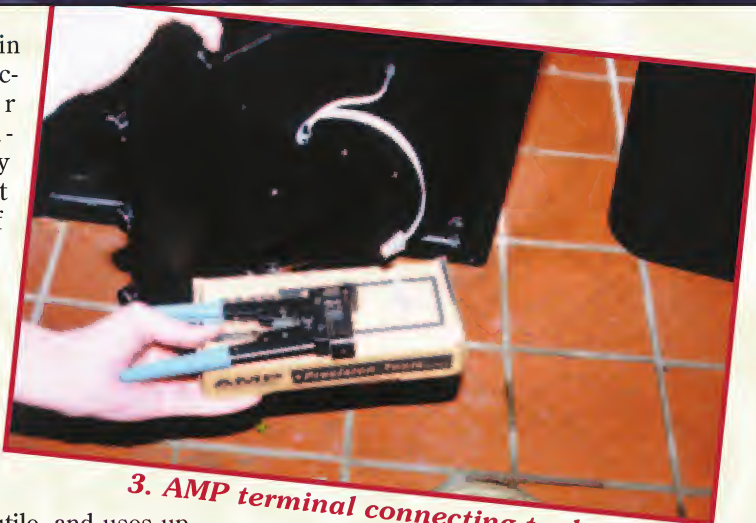
*Photograph 3*, shows the AMP tool for installing the 8 wire connectors. A brief side road, if you will. Many years ago, when the first LaGard swing bolt locks came out, they used the wide wire and connector to connect the keypad to the lock. (I am not picking on LaGard per se, but since their locks are everywhere, I see them the most). To retrofit one of these locks required an AMP tool to attach the clip to the

wire. The holes in most safes, especially rated for burglary containers, was only 1/4 to 5/16" at best. The tip of the connector was 9/16" in size. The wire would fit through any hole size, down to a 1/4".

Trying to drill a 9/16" hole through hard plate is fast and futile, and uses up too many hard plate drills. Easier to cut and replace the end connector.

When Tom talked to the factory, he thought it would be easier for the manufacturer to make the holes larger in the first place, so no cutting of the cable would be necessary. He said he would bring it to someone's attention. We will see.

With these locks, the new 3300 series, the AMP tool was necessary to effectively attach the cable end after installation. Now, most of the non-auditing locks use a 4-wire connector

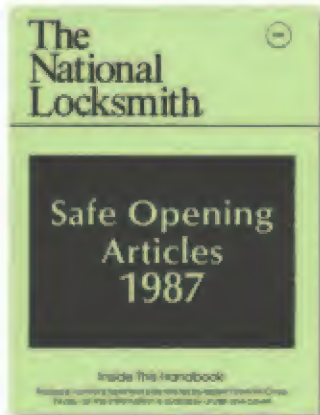


**3. AMP terminal connecting tool.**

that will fit through a 1/4" hole. I did not use my AMP tool for 3 years after the introduction of the 4-wire connector. I put it in a place that I would never forget.

Years later, when I needed the tool for a simple repair, I could not find it. I spent hours looking for the place where I logically placed it. I found lots of other things that I had misplaced, but I did not find the tool. I ordered another AMP tool from Lockmasters.

## Safe Opening Articles 1987



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#SA - 1

## High Security Safes Volumes 1 & 2



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#HSS, HSS - 1

## Penetration Party



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#PP - 1





4. Inside of Knight container with swing bolt lock mounted Vertical Down (VD).

you think I saw? Right, the original AMP tool and box of connectors. Well, at least I am consistent.

Photograph 4, shows the inside of the Knight Safe box. There is one innovation that I really like. Mounted to the back of the lock, not the back cover is the relocker

“L” or corner bracket. In the picture, it is on the right side of the lock as viewed here and is attached to the lock by the screws that attach the lock to the door. This is a stronger arrangement than attaching the relock plate by means of the cover screws doing double duty. The 1/4” screws used for attaching the combination lock to the body will take more abuse than the cover 8/32 screws will. Both types of retainers work, however.

The combination lock is mounted Vertical Down (VD) and the wires are

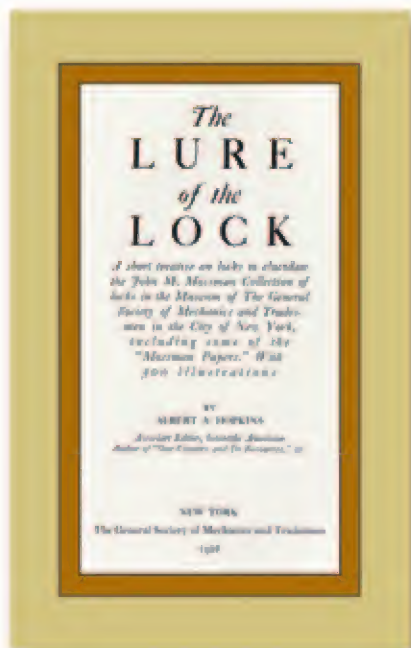
out of the way of moving parts. The 9-volt battery pack is seen to the left of the lock. There is also a bolt detent system next to the bolt control handle which is located directly below the lock bolt (not seen here). The silver pin in the end of the handle can be seen easily.

Both these lockouts were technically different on the same safe. The first time, the display read gibberish, and was not centered on the display screen. The second lockout had the word “OPEN” showing perfectly on the screen, but the safe would not open. Both problems were easily solved (possibly only temporarily) by rebooting. What caused the problems; I do not know or really care. What’s the difference between ignorance and apathy? I don’t know, and I don’t care.

On mechanical locks, I want to know. I know weather to repair or replace them. Most times replace. On electronic locks, since they cannot be repaired in the field by most technicians, it is easier and more prudent to replace them. Period!

So, live long, reboot, and prosper!

TNL



## The Lure of the Lock

This hardcover book, compiled in 1928, features dozens and dozens of beautiful photographs on ancient through modern locks.

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#LURE



# The UGLIER Side

More Ideas To Live By.



by  
**Sara  
Probasco**

Spring is in the air — a time for new beginnings! Every so often, at this time of year, I try to take stock of what-all is going on in my life and chuckle a bit at myself. (It's either that or cry a lot, which has a tendency to make my nose red and my eyes swollen.) So here are a few "ideas to live by" — or at least think about — that I've come across recently and would like to share:

- The main reason the human race will never achieve its full potential is meetings.
- Forgive your enemies. It'll drive them crazy.
- The main objective of most organized protests is to aggravate those who don't agree.
- Never confuse your job with your life.
- Live within your means, even if you have to borrow to do it.
- A person who is nice to you but rude to his wife is not a nice person.
- No matter what you say, somebody is likely to take offense.
- Nobody cares if you can't dance well.
- Do it anyway.
- When everything has "gone to hades in a handbasket," there is always one person with a solution who is willing to take charge. That person is usually crazy.
- Your friends love you anyway.
- Never be afraid to try your hand at something new.
- Remember, amateurs built the ark; experts built the Titanic.
- Who cares what happened last week?
- Whiners play alone.
- If you answer the phone, be ready to remember the message.
- Getting up early gives you more time to play.
- Never argue with an inanimate object.
- Go barefoot. In the grass.
- Don't tease a big kid.
- Never economize on luxuries.
- Give yourself a nickname before somebody else does.
- You can't stop the sled halfway down the hill.
- Hitting the kid who has the ball might get you the ball, but lose your playmates.
- Never vote for anybody with two first names.
- Play, don't watch.
- Shortcuts aren't always.
- Always have something in your pocket that you can trade.
- Sometimes it's smart to be scared.
- It's more fun to color outside the lines.
- It's hard to save the best for last.
- You'll never get to see the Big Dipper if you're too afraid of the dark to go outside.
- If you're going to pull it up, pull it up by the roots.
- As soon as you tell a secret, it's not one.
- Bad guys don't always wear black hats.
- Try not to forget your dreams.
- Sometimes your best move is blocked by your own checkers.
- If you always tell the truth, you don't need a good memory.
- You can sit around and wait for a ride, or you can start walking.
- Make your mother proud.
- If you don't want your house to be haunted, stop believing in ghosts.
- Trust everybody, but cut the cards.
- It's no good to have a ten-dollar bill when the candy machine only takes quarters.
- Chasing the cat is more fun than catching it.
- Crawling still gets you there.
- It's hard to unlearn a bad word.
- The path you're on looks different when you turn around.
- Sign your name BIG.
- Never eat Mexican food in Nebraska.
- Every good has a better, and every bad a worse.
- Every day comes with a day after.
- If it's in your way, climb over it.
- Sometimes the squeaky wheel gets kicked!
- Never have yourself tattooed with somebody's name.
- If it's going to be two against one, make sure you're not the one.
- Keep right on banging until somebody opens the door.
- Hug people for no reason.
- You can't unspill a glass of milk.
- Be afraid of anybody who is never afraid.
- Don't dump a puzzle on the floor unless you have time to put it together.
- Never judge a book by its movie.
- Where you're going is more important than where you are.
- Nobody likes a tattle-tale.
- Love your brother, even if he doesn't deserve it.
- Trade fair.
- It doesn't count when your swing is going the highest if you're getting pushed.
- Never underestimate the power of stupidity.

And last, but not least, the one that landed me in trouble when I shared it a few years back, (but I still think it holds great merit, even if some of you guys did get into hot water with your wives):

- Send flowers to someone you love, and come up with a reason later.

*Many thanks to Cynthia Copeland Lewis (Really Important Stuff My Kids Have Taught Me) and Dave Barry for portions of the above. TNL*

May 2000 • 87



# BUSINESS BRIEFS

## **Monarch Acquires Universal Coin Lock Company**

Monarch Tool & Mfg. Co., Inc. is pleased to announce the acquisition of the



Universal Coin Lock Company, a manufacturer of coin/token operated bathroom locks. Monarch, with nearly a century of experience in the

production of coin operated devices, has added another valuable coin operated product to its line.

For more information call: (800) 462-9460; Fax (606) 261-7403, E-mail sales@monarchcoin.com, or circle 323 on Rapid Reply.

## **Architectural Control Systems, Inc. Promotion**



Architectural Control Systems, Inc., has promoted Mark Legrand to President, effective January 1, 2000. He has been a part of Architectural's team since 1988.

## **Ingersoll-Rand Launches New Security And Safety Business**

Ingersoll-Rand announced it has restructured and renamed its Architectural Hardware Group, now called the IR Security & Safety Sector. The new Sector includes the following businesses: Commercial Security and Safety (North America), Residential Security and Safety (North America), Electronic Access Controls, and several international business units.

## **RCI Doubles Manufacturing Facility**

Rutherford Controls Int'l. Corp. (RCI) has recently expanded their manufacturing facility, doubling the size of the plant. The expansion also includes the completed acquisition of a metal fabrication mill. RCI is rapidly evolving the manufacturing core of their business to better serve the access control and architectural hardware requirements of locksmiths, alarm dealers, contract hardware and security consultants and access control system integrators.

## **Lockmasters Adds to Staff**

Lockmasters has added Scot T. Hooper to the Education Division and Tom



Woodall as Manager of Lockmasters Security Management Training. Brooke Berry has been added to the education staff.

## **Medeco Wins Two National Safety Awards**

Medeco Security Locks has received two awards from the National Safety Council. The Council has recognized Medeco for its perfect record in its occupational safety health program. Medeco has the best record in the fabricated metal products industry, having gone 2.9 million hours without an injury involving days away from work.

## **Keri Expands Globally**

Keri Systems, Inc. has added two new international sales offices. Keri Systems UK Ltd., in greater London is staffed by Garry Pound, UK Sales Manager and Steve

Henderson, UK Applications Manager. Keri Systems Latin America, in Miami, Florida is staffed by Felix Pacer, Latin America Sales Manager. These two new offices compliment Keri's original international office located in Sydney, Australia.

## **Von Duprin Impact™ Recessed Exit Device**

The recently introduced Von Duprin Impact™ recessed exit device has completed tests to 1,000,000 cycles, or four times the industry average. The new Series 9447 and Series 9547 concealed vertical rod devices combine architecturally sound aesthetics with superior functionality.



For more information contact: Von Duprin, P.O. Box 6023, Indianapolis, IN 46206 or circle 324 on Rapid Reply.

## **Zero International Online CAD Drawing Library**

CAD drawings for 55 of Zero International's most specified door gaskets and other components are now available electronically through the company's web site. The CAD library is an annex to the online catalog.

For more information visit www.zerointernational.com or circle 325 on Rapid Reply.

## **Security Door Controls ISO 9001 Certified**

SDC has developed a comprehensive quality management system that has

been audited and certified by the British Standards Institution (BSI) as meeting ISO 9001 requirements

For more information phone: (805) 494-0622; Fax: (805) 494-8861; Web: at www.sdcsecurity.com.

## **Olympus Announces New Sales Manager**

Olympus Lock is pleased to announce the addition of Jim Negri as General Sales Manager. Jim brings over twenty years of management experience in the security industry to his new position with Olympus.

For more information contact Olympus at (800) 525-0954.

## **Aiphone Redesigns Web Site**

Aiphone Corp., has redesigned its web site to offer expanded product information. Located at www.aiphone.com, the site now contains more product and company information than ever before.

For more information call: (425) 455-0510.

## **Clark Security Products Acquisition of American Security Distribution**

Clark Security Products has acquired Anaheim-based American Security Distribution, in a private sale that significantly expands Clark's line of products, network of dealers, and customer base. The acquisition of American Security Distribution is a strategic move to rapidly grow SecureRite.com's network of affiliated dealers and line of products prior to expanding its sales to businesses as well as consumers.

TNL



# Quick Entry

## UPDATE

by  
Steve  
Young



### 1997-2000 CHEVROLET CORVETTE

**W**hen the 1997 Corvette was introduced, (see photograph 1) it became the first GM vehicle in many years to be equipped with an in-dash ignition lock. Quite a few other GM vehicles have been introduced since then with in-dash ignitions.

VATS was first introduced on the Corvette in 1986. The term VATS stands for Vehicle Anti-Theft System. From the very beginning, this term has confused customers. When GM began using the VATS system on other vehicles, the term PassKey was adopted as a more self-explanatory name. There is no difference between PassKey and VATS other than the name.

In the early '90s GM began using the term PassKey II when an improved electronics module was incorporated into the system. But once again, from the locksmith's point of view there is no difference between VATS, PassKey and PassKey II other than the names. Key duplication and origination procedures are identical for all three systems.

The in-dash ignition lock makes this a challenging vehicle to originate keys for. Fortunately the Corvette roadside assistance system can usually provide the original owner of the vehicle with the key code if the keys are lost. The phone number is: (800) 222-1020.

Unfortunately, once the vehicle changes hands it can become very difficult to get the key code from GM. Since the door lock can only provide half of the information necessary to generate a key, you will be forced to work with the in-dash ignition to get



1. 1999  
Chevrolet Corvette.



2. The Tech-Train Win-Bag inflatable wedge and the TT-1008 tool.



3. Insert the Win-Bag near the center of the door and carefully inflate.



4. Lever the linkage rod forward to unlock the door.



the remaining five cuts of the key if you cannot get the key code. This can be done in several ways including try-out keys, the R&D pick set, the PS3 Ignition lock tool from A-1 or by physically disassembling the lock after pulling the retainer out of the side of the lock.

Unlocking the Corvette is a relatively simple job, but you do have to be careful with the multi-layer weatherstripping at the base of the window. For that reason, I recommend an inflatable wedge system like the original Win-Bag. (See *photograph 2.*) Originally designed as a leveling device for the construction industry, these tools are extremely rugged and powerful. So powerful in fact, that you need to exercise caution whenever you use one to prevent breaking the window or damaging the weatherstripping. This is especially important on the Corvette because of the fiberglass door construction.

As you pump up the wedge, listen carefully for any sounds of stress from the vehicle. In addition, be ready to release the pressure inside the Win-Bag as rapidly as possible if anything does go wrong. That is

#### Quick Reference Guide

<b>Vehicle:</b> 1997-2000 Chevrolet Corvette	<b>Security System:</b> PassKey II (VATS)
<b>Direction Of Turn:</b> Counter Clockwise (driver's side)	<b>Code Series 97-99:</b> AA00-7T51
<b>Tool:</b> TT-1008 (long end)	<b>Code Series 2000:</b> S00A-S711K
<b>Lock System:</b> 10-cut GM, dash mounted sidebar ignition with plate tumbler (wafer) style door locks	<b>Lock Manufacturer:</b> Strattec
	<b>Bitting:</b> Ignition 1-9, Doors 6- 10, Compartment Lock 7-10



**5. Inside the door, the linkage rods are encased in a soft cloth anti-rattle tube. The lower of the two linkage rods is the inside lock control linkage.**

why I prefer the push-button valve of the Win-Bag to the screw-type valves. A split second can make the difference between a close call and a broken window.

To unlock the Corvette, begin by inserting the Win-Bag near the center of the door. (See *photograph 3.*) This will require the use of at least one conventional wedge to start the Win-Bag into the door cavity and to work it past the multi-layer weatherstripping. After at least half of the Win-Bag is below the weatherstripping, begin inflating the tool. Watch the gap between the window and the weatherstripping carefully and stop inflating the tool as soon as you have enough room to insert the car-opening tool.

Insert the long end of the TT-1008 tool into the door between the wedge and the outside door handle. (See *photograph 2.*)

Lower the tool eight to ten inches into the door and then rotate the tool so that the tip of the tool is pointed to the inside of the

vehicle. Pull up on the tool until the end of the tool hooks onto the lower of the two linkage rods inside the door. If you have trouble locating the linkage, pull the top end of the tool away from the vehicle as you probe for the linkage. This will move the hooked end of the tool further toward the inside of the vehicle. Once the tool is hooked onto the linkage rod, twist the top of the tool to bind the linkage and then lever the linkage rod forward to unlock the door. (See *photograph 4.*)

Inside the door, the linkage rod is encased in a soft cloth tube. (See *photograph 5.*) This tube is designed to keep the linkage from rattling inside the door and is not a guard. As you bring the tool into contact with the linkage, the tube will compress between your tool and the linkage rod. The tubing may make the contact between your tool and the linkage feel "mushy," but it will not prevent you from unlocking the door.

Because of the placement of the linkage rods inside the door, they are very difficult to see with an inspection light. The long end of the TT-1008 tool is exactly the right length to easily locate the linkage by feel. For that reason I do not recommend the use of an inspection light on this particular vehicle. **TRL**

## 15 Minute Safe Opening



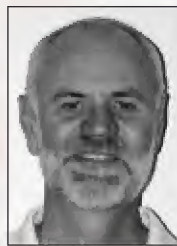
This book deals exclusively with round head lift out doors. Shows five ways to open a Major; three ways to find the Dog Pin on a Major; four ways to open a Star; four ways to open a LaGard style round head.

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#JJ - 1



# 1998 YAMAHA V Star Classic



by  
**J**ohn  
Blankenship



**1**. The V Star Classic is designed to appeal to the popular "cruiser" market. With a 650cc V-twin engine it is a relatively economical cruiser and therefore popular. There are only two locks on this bike and originating a key to them is not too difficult. Begin with the gas cap lock.

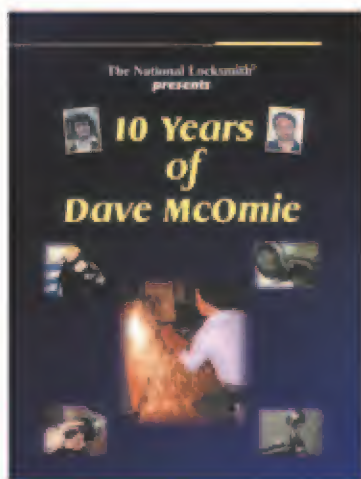


## Gas Cap Lock



**2.** The gas cap is located on the gas tank just to the right of the instrument panel. The number stamped in ink under the dust cover is not the code. There are no key codes anywhere on the motorcycle. The lock can be read or impressed if you have the skills, although disassembly is a good way to go. I picked the lock easily using a rake. Turn the plug 90-degrees clockwise against spring pressure and hold it there while you remove the gas cap.

**3.** This view of the bottom side of the gas cap shows the two locking bolts that withdraw when the plug is turned. The two screws have to be removed to proceed with disassembly. The Phillips screw is original and the slot screw is a sign that someone has been into this cap before me, lost the original screw, and replaced it with this one.



## 10 Years of Dave McOmie

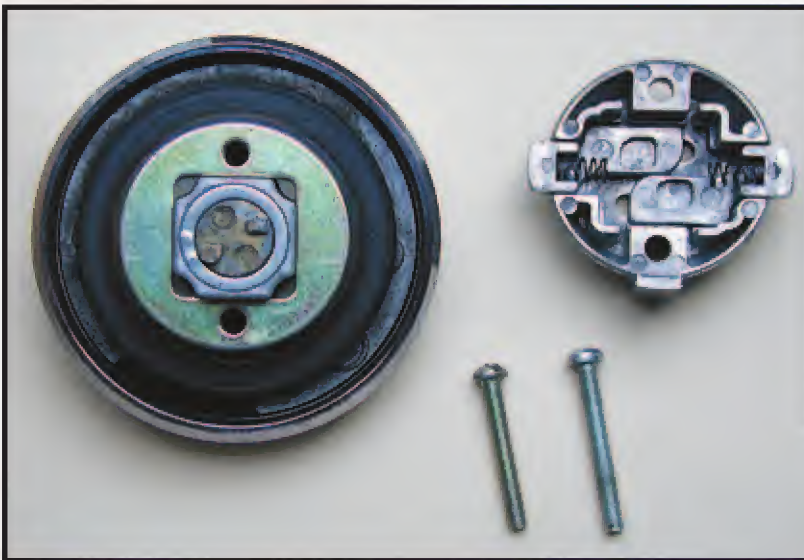
Every single National Locksmith article by Dave McOmie from August 1986 through August 1996 under one cover!

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#DM - 10





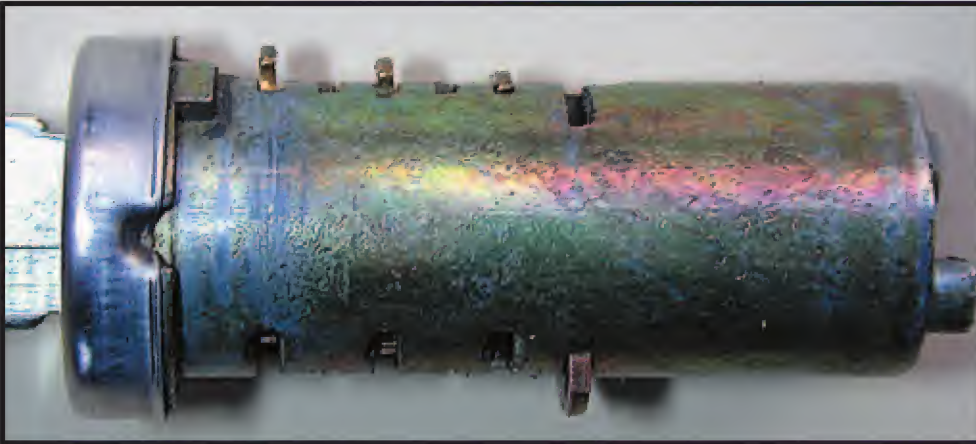
**4.** Remove the two screws, bolt housing, bolts, and springs. Reassembling these parts is a little tricky. I found it best to place the bolts and springs in position on the gas cap and slide the bolt housing down over them.

**5.** I removed the washer from over the "O" ring on the back of the plug and placed it on the left. I then removed the retaining plate from the lock housing and placed it on the right. Next I removed the sealing plate and placed it on the lower right. Then I removed the lock housing from the gas cap cover and placed it on the lower left. Notice the four copper colored springs in the lock housing. Remove and store them where they won't be misplaced.



**6.** I removed the "O" ring from the rear of the plug with a dental pick and placed it on the left. Then I turned the housing over and allowed the bushing to slide out from around the plug and placed it on the right. Now the retaining wafer can be seen on the top side of the plug down deep in the hole. I depressed the retainer with a dental pick and slid the plug out the front of the housing. The wafers fall out of the plug easily so be careful not to dump them.

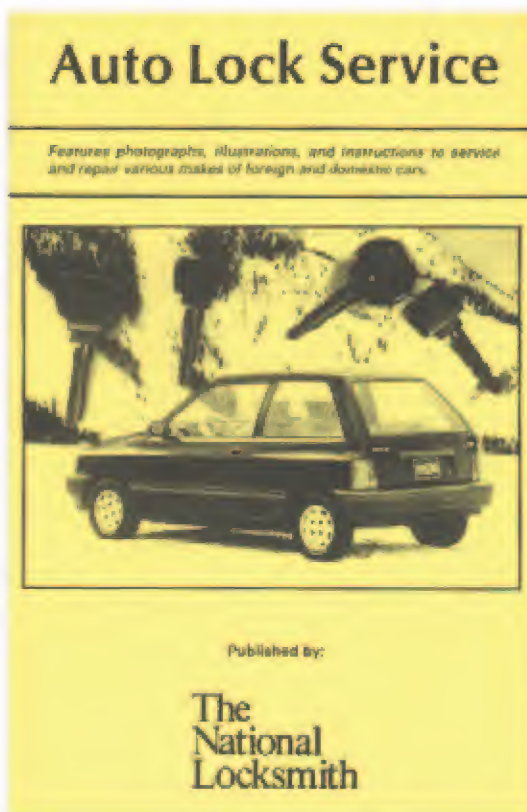




**7.** The plug contains five wafer tumblers all on one side and a retaining wafer. A key blank inserted into the plug shows that the cuts are 41312. These cuts are in spaces 3 through 7. Cut the blank to operate this lock and then obtain the cuts for spaces 1 and 2. A code search using key code software revealed there are only three possible combinations for spaces 1 and 2: 1-4, 2-3, and 4-2. You can also progress, read, or impression the ignition lock.



**8.** The wafers in the gas cap plug are thin and care should be taken when impressing them. From left to right are tumblers with depths 4-1-3-1-2 and the retainer. The retainer is open on the bottom to prevent a pick from being used in the keyway to retract it and pull the plug without disassembly. It is possible to use a sharp pick in the keyway to bite into the side of the retainer and pull it down so the plug can be pulled out, but it is difficult. If you want to try it, the retainer is 53/64 inch (21.04mm) from the face of the plug.



#ALS - 1

# Auto Lock Service

Covers opening and service techniques.

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## Ignition Lock

**9.** The ignition/steering lock is located on the right side of the motorcycle in front of the gas tank. It is shown in the "OFF" position, which means the ignition is off, but the steering is unlocked. To lock the steering you need to turn the steering to the right or left, insert the key, push the plug in, and turn it counter-clockwise to the "LOCK" position. To unlock the steering you need to insert the key, push the plug in, and turn it clockwise to the "OFF" position. Make sure the steering is not binding the locking bolt when you do this. Turning the lock between OFF and ON does not require pushing the plug in. This lock is difficult to pick.

**10.** You may need to remove the ignition lock for a variety of reasons including rekeying, repair, broken key removal, or to originate a key if the gas cap is missing or has been changed. Begin by removing the two 12mm bolts that hold the rear of the gas tank to the frame. The photo shows the left mounting bolt located below the left rear of the gas tank. This bolt also holds the choke mounting bracket on. Remove it and the one opposite it on the right side of the motorcycle.



**11.** Raise the back of the gas tank above the seat and pull it back gently until it is stopped by the cables that are attached to the instrument panel on top of the tank. Do not pull too hard and risk damage. Rest the back of the gas tank on the seat and you now have just enough room to continue.



**12.** Remove the 10mm bolt that secures the ignition lock cover. It is visible just above the ratchet handle. The bolt with the socket on it does not have to be removed.







**13.** Remove the right front tank mount by pulling it off. Raising the right side of the tank will create just enough room to squeeze it out.



**14.** The top of the ignition lock cover is connected to its counterpart on the other side of the motorcycle by a tab and slot arrangement. The cover you remove has the slot and you need to raise it up over the tab to remove it.

**15.** The ignition lock cover is shown removed. It is a tight fit, but it is made of flexible plastic and will come off with a little manipulating.



**16.** Use duct tape to secure the two control cables and the electrical cable up out of the way. Be sure to remove the tape after reinstalling the lock. Remove the two 5mm hex bolts that hold the ignition lock to the frame. The upper bolt is visible just below the duct tape and the lower bolt has a 5mm hex bit socket inserted into it.



**17.** Pull the ignition lock out. If the steering is locked you will need to move the lock toward the rear of the motorcycle to clear the locking bolt and then pull the lock out. Unplug the electrical connector that connects to the ignition switch on the back of the lock. You need to push down the white locking tab to remove the red plug. The number stamped in ink on the lock housing is not the code number.

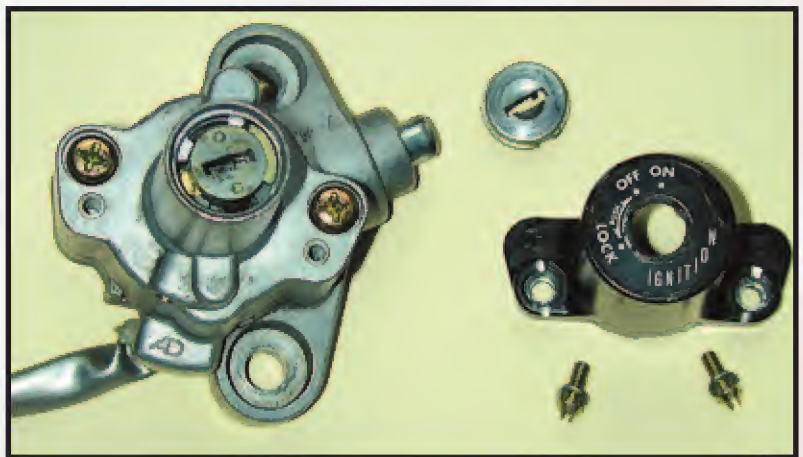
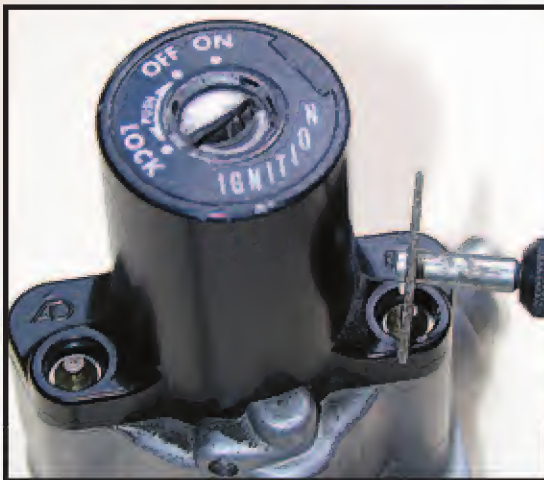
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**18.** The ignition lock is shown removed from the motor-cycle. Remove the two round, black plastic covers using your thumbnail or a small screwdriver. They just pop right off.

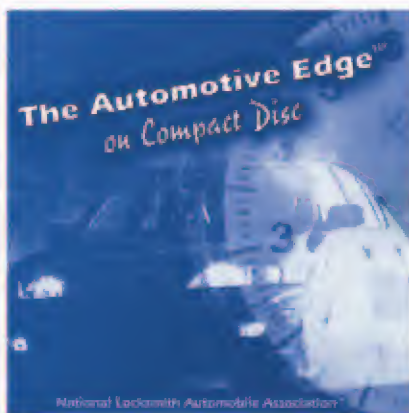
**19.** Now you can see two small shear head bolts that need to be removed. Use a Dremel with a cut-off wheel to cut a slot into the top of each bolt. Now you can use a small screwdriver to remove the bolts. After you replace the bolts you can use a hammer and punch to close the slots and maintain security.



**20.** Remove the two bolts, cover sleeve, and the hardened faceplate from the lock housing.



**21.** The lock needs to be in the OFF position so that the lugs on the back of the plug will align with the grooves inside the housing. Then the plug can be pulled out the front as shown. Make sure you do not lose the spring on the back of the plug.



# AutoEdge

This CD contains over 750 pages of automotive locksmith service.

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#AE - CD





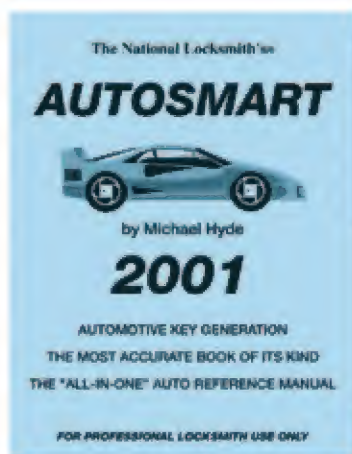
**22.** The ignition lock plug is shown removed from the housing. The front of the plug is on the left. There are eight wafer tumblers all on one side of the plug. The first seven wafers are positioned by the cuts in the 7 spaces that we cut on the key. The pre-cut tip on the blank positions the eighth wafer. The first two wafers are a #2 depth and a #3 depth. These 2 cuts added on to the 5 cuts we got from the gas cap give us all 7 cuts, which are 2341312. Converting these cuts to code using key code software shows the code is A7851.

**23.** From left to right is a #2 depth wafer from the gas cap lock, a #2 depth wafer from the ignition lock, and the ignition wafer that is positioned by the pre-cut tip on the key blank. The ignition wafers are thicker and larger than the gas cap wafers. I was unable to determine a keying kit for these locks, but the wafers are the same as those used in late model Suzukis using the X241 blank. The spacing and depths are even the same.



**24.** The original Yamaha key is shown on the left. On the right is a Silca YH35RBP blank that has been code cut to operate all the locks on the motorcycle.

## AutoSmart



A MUST  
for every  
locksmith!

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— The locks are available at Yamaha dealers —  
Ignition/Steering: Part Number 4VR82501-00-00, Price \$107.50  
Gas Cap: Part Number 4NK2-24602-10-00, Price \$93.90  
Codes: A7001-A8500  
Blank: Ilco X248 (YM63), Curtis YM63, Silca YH35RBP  
Spacing: 1=.157; 2=.256; 3=.354; 4=.453; 5=.551; 6=.650; 7=.748  
Depths: 1=.295; 2=.276; 3=.256; 4=.236  
HPC Card Number: CMC71  
ITL Number: 523  
Curtis: MZ-3 cam & SU-2B carriage  
Tumbler Locations: 1 2 3 4 5 6 7  
Ignition: x x x x x x  
Gas Cap: x x x x x

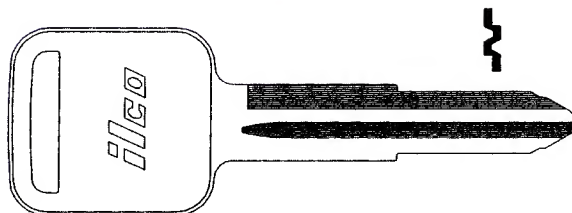
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# KEY CODES

The HPC 1200CMB and  
1200PCH code cards for this  
code series are between  
pages 94-97.

## Geo Series U0001-U2000, Part 2



**Manufacturer:** Geo  
**Code Series:** U0001-U2000  
**Key Blanks:**  
**Curtis:** B70  
**Ilco:** X184, X185  
**Ilco EZ:** B65, SUZ15  
**Silca:** GM19  
**Taylor:** X184  
**Number of Cuts:** 8  
**M.A.C.S.:** 2  
**Key Gauged:** Shoulder  
**Center of First Cut:** .098  
**Cut to Cut Spacings:** .083  
**Cut Depth Increments:** .027

**HPC 1200CMB**  
**Code Card:** CF88  
**Jaw:** A  
**Cutter:** CW-47MC  
**Gauge From:** Shoulder  
**HPC 1200PCH (Punch):**  
**PCH Card:** PF88L, PF88R  
**Punch:** PCH-47  
**Jaw:** A  
**Silca UnoCode**  
**Card Number:** 264  
**HPC CodeMax**  
**DSD #:** 247  
**Jaw:** A  
**Cutter:** 47MC  
**Curtis No. 15 Code Cutter:**  
**Cam-Set:** DC-50  
**Carriage:** TOY-50

**Framon #2:**  
**Cuts Start at:** .098  
**Spacing:** .0830  
**Block #:** 5  
**Depth Increments:** .027  
**Cutter:** FC8735  
**Key Clamping Info:** Use  
flip-up shoulder stop.  
**A-1 Pack-A-Punch**  
**Quick Change Kit:** PAK-  
G04  
**Punch:** PKS-88T  
**Die:** PKS-88T  
**ITL 9000 & 950**  
**Manufacturer ID:** 196

**Spacings:**  
1 - .098  
2 - .181  
3 - .264  
4 - .346  
5 - .429  
6 - .512  
7 - .594  
8 - .677  
**Depths:**  
1 = .327  
2 = .299  
3 = .272  
4 = .244

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#TNL - CD1





## The 2000 Cadillac Deville

**W**hen people talk about quality, the conversation inevitably moves in the direction of the Cadillac, the benchmark of quality for automobiles. The fact is, Cadillac has manufactured some of the finest automobiles ever made, and its reputation for luxury and reliability are virtually undisputed. Not surprisingly, when Cadillac released the completely redesigned 2000 version of the Deville, sales have been tremendous. (See photograph 1.) As a locksmith, you will now doubt run into one of these beauties soon, if you have not already.

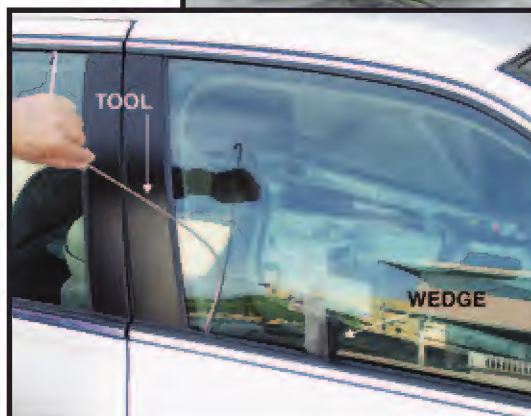
by Nelson Rivera

The 2000 Deville is smaller and sleeker than its predecessors, however, it is actually roomier on the inside. Like other Cadillac's in the past — and surely in the future — this machine looks and handles like a dream. Your customer will no doubt expect you to be gentle with their car of a lifetime. There are a few vehicles which must be handled with care and professionalism and the 2000 Cadillac Deville is definitely one of them.

Several 2000 model vehicles, including the Deville, are built on the new General Motors "G" chassis, but most require a unique opening method. In this instance, related vehicles do not necessarily open the same way. The rock solid Deville is easy to unlock- if you have the correct tools.



1. The 2000  
Cadillac  
Deville.



2. Insert a strip saver  
and wedge in the  
passenger side door.



The 2000 Deville is equipped with a side airbag, but it is seat mounted, meaning there are no components in the door. You have no doubt heard all of the hype concerning side air bags, and while we will not address the merits of those arguments here, the fact that the airbag is in the seat, not the door, makes the airbag a non-issue. Any good quality auto opening system will provide you with a side airbag guide in the manual. This is becoming a critical part of a locksmith's work, and he or she can no longer afford to be without such a guide.

We will demonstrate two opening methods for the 2000 Cadillac Deville using the new Model 2000 opening set from High Tech Tools.

As always, insert a strip saver and a wedge in the passenger side door to create adequate working room for your tool. (See photograph 2.)

**N**ext, take the number 47 — also known as the 'S' tool — and lower it into the door. Lower the tool directly behind the door lock button, which is visible from inside the window. (See photograph 3.)

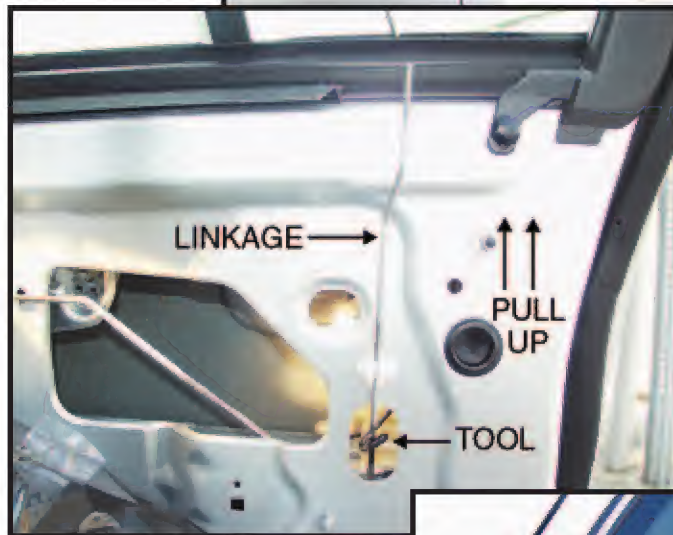
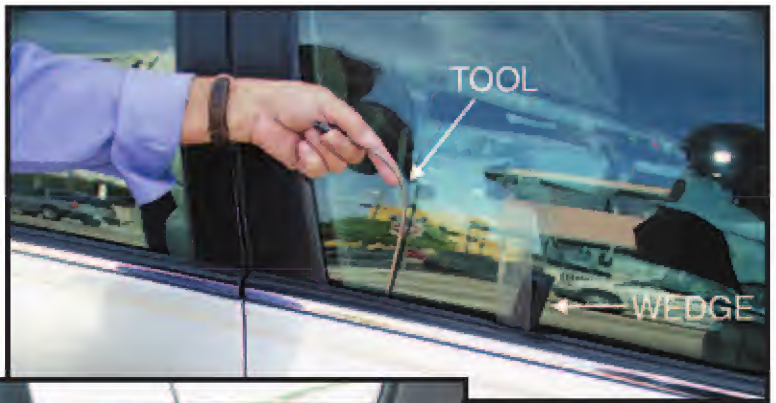
Fish around for the lock rod, and once the door lock button moves, signifying contact with the rod, twist the tool to hook and bind the door lock rod. Once the rod is grasped, simply lift the tool to unlock the door. (See photograph 4.)

As with many vehicles, High Tech offers more than one opening method, and the Deville is no exception. It is important to know that while the Deville uses a vertical linkage system, the rear doors use a bell crank to transfer the motion from the horizontal to the vertical linkage.

With that in mind, we insert the strip saver and wedge into the rear passenger door and with the working end of the number 23 Horizontal Linkage Tool facing the rear of the vehicle, lower it into the door. (See photograph 5.) Once in the door, twist the tool handle to allow the hooked end of the tool to access the linkage.

As seen in the photograph, you will be hooking the linkage in order to move it forward and unlock the door. (See photograph 6.) Once the linkage is bound, turn the tool handle towards the rear of the vehicle to move the linkage. (See photograph 7.)

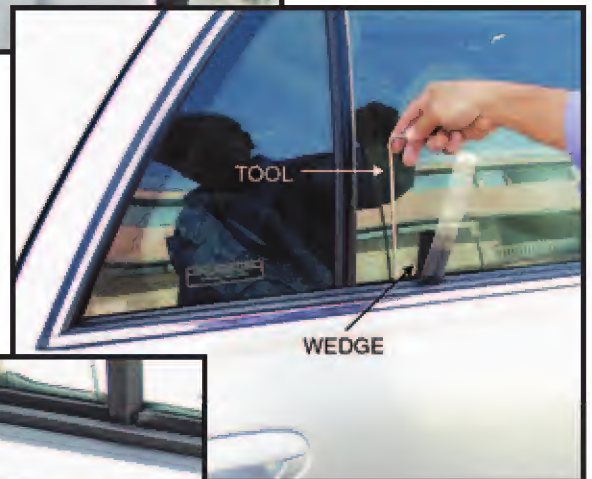
As you can see, with the right tools, this vehicle is easy to unlock. **TNL**



**3.** Lower the tool directly behind the door lock button.

**4.** Once the rod is grasped, simply lift the tool to unlock the door.

**5.** Insert the strip saver and wedge and the working end of the number 23 Horizontal Linkage Tool.



**6.** Hook the horizontal linkage.

**7.** Turn the tool handle towards the rear of the vehicle to unlock.





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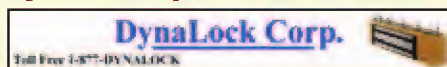
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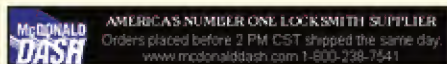
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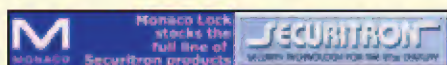
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## WEB REVIEW

### Adesco Safe Manufacturing Co.

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This site shows you how to choose the right safe for any particular application. Categories include Home & Small Business Floor Safes, Business Depository Safes, Fire Safes, Commercial Floor Safes, Burglar & Fire Protection Safes, Free Standing Safes, Wall Safes and more.

A comprehensive article by Earl Halls explains in detail the various safe ratings. A handy What's New button allows you to instantly see the latest company news. At the time of this visit, Adesco was introducing new lower pricing on their popular line of Burglar Fire safes.

One really nice feature of this site is the online catalog. You can easily see all the specs on every safe, and even print pages out to use when showing product to customers. The entire site is well designed and will give you complete details not only on Adesco's products, but will also give you an education on safes as well.



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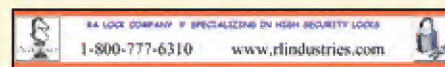
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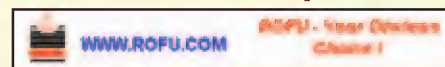
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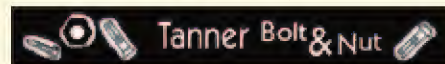
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May 2000 • 135



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## TEST DRIVE!

If you have watched the news at all lately, you know that one of the hot topics right now is gun control. With the number of school shootings on the rise (the latest by a 6-year old) Congress is reviewing a law that would require a gun to be locked and stored in a safe at all times, or have a trigger lock when not in use.

This is music to the ears of after market suppliers of gun security devices, because as long as this remains a hot topic, sales for security devices will be as well. There are several gun safes and trigger locking devices on the market to choose from. We will take a look at one called the GunVault.

**DESCRIPTION:** With interior dimensions of roughly 6-1/2" high by 9" wide by 13" deep, the GunVault has a capacity to store most handguns and still have room to store personal items like papers, jewelry, passports, diaries or other small items of interest.

What distinguishes the GunVault from other similar security boxes, is this unit features a unique four-finger pad to electronically unlock.

**CONSTRUCTION:** The GunVault is made from 16 gauge steel that has a powder coated wrinkle finish. The door is spring loaded for quick access and recessed to prevent prying with hand tools. The interior is foam padded to prevent damage to items stored.

**FEATURES:** The deluxe GunVault features a changeable electronic finger touch keypad, a tubular override lock, motion detector with audible alarm, interior light, optional DC power jack and a sleep mode feature. In the deluxe model up to

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three access codes can be programmed and changed at any time. The standard GunVault does not feature the motion detector with audible alarm or interior light.

The unit requires 8 AA batteries for operation. There is also an optional DC power adapter that can be purchased at Radio Shack (#273-1680) and used in permanent situations. An optional security cable allows the unit to be used and secured in a car, RV, office or hotel/motel setting.

**PROGRAMMING:** Enter the factory code of 1-2-3-4, or the existing code. There is a soft beep sound and a brief light with each entry. The door will open when the last number is input. Press and hold the Learn button on the inside for 2-seconds. You will see a green light on the finger pad and hear a beep. Enter the new code (up to four digits can be used from 1-4) and the indicator light will remain green. Press and hold the Learn button again for 2-seconds. The light will turn red and you will hear a beep. When the light is red, enter the new code a second time to confirm it. Press the Learn button again for 2-seconds. The indicator light will blink green 5 times and you will hear 5 beeps, confirming the new code has been accepted.

**Motion Detector:** To arm the motion detector feature, press buttons one and four at the same time and hold for more than 5-seconds. A beep will sound once per second for 10-seconds. The alarm feature is now armed.

### Tamper

**Detect:** Entering an invalid access code sets the tamper indicator. To determine if the unit has been tampered with by entering the wrong code, hold down buttons two and three for five seconds to read the tamper indicator. If tampering has been detected, the red light will glow until buttons two and three are released. If tampering has not been detected, the green light will glow until buttons two and three are released.

**PRICE:** The price of the GunVault is \$209.95 for the standard model and \$239.95 for the deluxe model. There is also a \$14.95 shipping charge.

**CONCLUSION:** This is a well constructed and cleverly designed strong box. The idea behind the finger pad is so blind opening can be achieved. The finger positioning is a tad wide for my liking and the buttons require some force to depress when the hand is flat against the placement pad. Women with small hands may find the finger pad a bit awkward to operate.

With the added built-in features of the GunVault, there is much more here than what meets the eye.

For more information on the GunVault phone: (480) 951-6855; Fax: (480) 951-6884. Circle RR#310.

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### IN SUMMARY:

**DESCRIPTION:** A strong box designed to store most handguns and other personal objects.

**PRICE:** Standard: \$209.95; Deluxe: \$239.95

**COMMENTS:** Women with small hands may find the finger pad a bit awkward to operate.

**TEST DRIVE RESULTS:** There is much more to the GunVault than what meets the eye.